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SYPHILIS

SOME PSYCHOLOGIC ASPECTS OF TREATMENT *

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The management of a syphilitic patient presents greater problems than are encountered in the treatment of patients with other infectious diseases. In order to achieve a cure, the patient must submit to a form of treatment which is unpleasant, more unpleasant usually than the symptoms that he presents, and which must be continued long after the last visible signs of the disease have disappeared. Furthermore, because of the highly communicable nature of the infection, the patient must impose many restrictions on himself, at least during the first months of treatment. If he already has exposed his family to the infection, they must be examined, and treated if necessary. Such a procedure requires the patient's unquestioning acceptance of the diagnosis, a realization of the serious condition implied by that diagnosis and a high degree of cooperation over a period of months or years.

THE PATIENT'S REACTION TO THE DIAGNOSIS

Every syphilologist knows how seldom cooperation is obtained. Patients seem prone to refuse to accept the diagnosis, and they are hard to convince that the somewhat insignificant primary sore or the milder secondary lesions are really symptoms of syphilis. Some, who do accept the diagnosis, seem unable to appreciate the dangers of the disease to themselves or to other people or the need for intensive treatment. This careless attitude is noted in otherwise intelligent patients and frequently leads to the cessation of treatment as soon as the presenting signs have disappeared. To others, the diagnosis comes as a terrific shock. During some or all of the treatment, and perhaps during the remainder of their lives, such patients experience a state of depression and fear of the disease, of their infectivity, of the outcome and of the treatment itself. Whatever type of attitude develops, the syphilitic patient seems to react more to the knowledge of his disease than to that of any other serious illness. Because of this over-reactivity, the aim of therapy—sufficient treatment until the infecting organism is eradicated—is hindered.

* Submitted for publication, Oct. 11, 1930.

* From the Philadelphia Child Guidance Clinic.

FACTORS THAT UNDERLIE THE PATIENT'S REACTION

Although the physician is aware of the tragedies that follow the lack of cooperation, he often finds himself baffled when he encounters such a patient, and he feels the need for some legal enactment that will coerce the patient for his own benefit. These legal enactments are notoriously ineffective. It seems more needful for the syphilologist to add to his knowledge of the symptomatology and pathology of the disease and of the technical therapeutic methods some understanding of the effect of the diagnosis of syphilis on the patient and his family and the reasons for that effect. This presupposes a knowledge of the attitude of the public toward the disease, the reasons for this attitude and the effect of this attitude on the reaction of the syphilitic person. Perhaps a fuller understanding of these factors might result in obtaining greater cooperation from the patient and a more effective use of therapy. The purpose of this study is to discuss the effect of the diagnosis of syphilis on the patient and on his relationships with his family.

Attitude of the Public Toward the Syphilitic Patient.—The public regards the syphilitic person as an outcast. Part of this attitude is due to the fact that syphilis is a serious disease, that it is usually not acquired accidentally, and that it produces untold suffering and misery for the patient, his wife and his family; but the true basis is something more fundamental. Much as syphilologists may desire to inculcate the point of view that syphilis is an infectious disease and not a disgrace, it is a sexual disease generally acquired through intercourse. Being a sexual disease, it comes under the sway of the psychologic mechanisms connected with the control of the sex instinct. The life of every person from infancy is a struggle to adapt the sex urges to the demands of reality. He frequently finds the control demanded by his parents and society difficult, and so calls to his aid his internalized conscience (codes of morality, etc.), which represses the urge and keeps it unconscious. At the same time, many other neutral ideas associated with the urges through experience are also repressed. It is in this manner that many persons keep their sex desires controlled. Wishing to give free expression to their desires, and being unable to do so, these persons are unconsciously envious of those who can; therefore they shun and despise the syphilitic person because he is a living example of what they would like to be—free sexually—and dare not. Crawley[1] has pointed out that physical contact places one marital partner under the control of the other. Woman is regarded by primitive man as a

1. Crawley, A. Ernest: The Mystic Rose, New York, Boni and Liveright, 1927.

dangerous person, and contact with her is regarded as weakening; many primitive men will not sleep in the same bed with their wives because of this idea.[2] Sexual contact is more weakening still, of course, and the syphilitic person is one who has weakened himself and become diseased by placing himself in the power of a person of the opposite sex. The attitude of the general public toward the syphilitic patient is partly based on the primitive type of thinking and partly has an unconscious motivation; conscious disgust and fear are the substitutes for the unconscious envy of syphilitic person's sexual freedom.

Because syphilis is a sexual disease, the attitude of the general public toward it is based on the usual attitude toward sex. The former is hardly subject to change until a change has occurred in the latter. The effect of this attitude on the reactions of the syphilitic person to the disease, its therapy and the relationships within the family, and, if he is married, not only his relationships but those of his marital partner and the children, remains to be considered.

Effect of the Attitude of the Public on the Syphilitic Patient.—The attitude of the general public has an unconscious basis, and, therefore, it is reflected in the patient's own unconscious reactions. The unconscious attitude toward the disease before he acquired it was similar; therefore, his infection comes as a blow to his pride, to his vanity and to his self-love (narcissism). He has been unable to control his instinctive impulses, and he has been led to believe that to allow these impulses free rein is wrong. As a consequence, he has been punished for his wrong-doing; the punishment takes the form of a serious disease of the genitals, which logically means that for a while, and perhaps for all time, he may not have sexual gratification, i. e., the punishment is really a castration. Such an idea arouses intense anxiety.[3] The patient does not dare to face an accurate diagnosis because of the anxiety, and he tends either to repudiate the diagnosis at once or to accept it as long as

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2. The underlying basis for this feeling probably lies in the fact that the woman symbolizes the mother for the male and the man, the father for the female. The desire for the parent of the opposite sex must be repressed at all costs because of the guilty feeling attached to incestuous desires. Consequently, all women are regarded by the male as dangerous, that is, as desired objects that must not be approached for fear of a resulting catastrophe (castration); all men are so regarded by the female. This fear is seen at its height in cases of male impotence. As all women typify the mother, sex relations with any woman are impossible because the superego that aids in the repression cannot distinguish between the mother, who was the only woman when it was formed, and other women. The ego is in touch with reality and it can make the differentiation, but it is under the domination of the unchanging superego. Consequently, the man is impotent with all women.

3. Jones, Ernest: The Psycho-Pathology of Marked Anxiety, Brit. J. M. Psychol. **9**:17 (May) 1929.

the primary lesion is present and to repudiate it again as soon as the lesion is healed. If the patient is one who labors under an unconscious dread of losing his virility, or one who fears sex relations as sinful as a result of emotional relationships of his childhood, i. e., one who has an unconscious dread of castration, it is difficult for him to accept the diagnosis with all that it implies. He does not dare to accept it; if he does, it means that his fear of castration has become a reality; he would rather believe that the genital lesion is a scratch, a herpetic ulcer or a chancroid. If he accepts the diagnosis tentatively, when treatment has healed the initial lesion he feels that the diagnosis was wrong, and he discontinues treatment, for continuing it keeps his fear constantly active. Certain persons will attempt to prove their potency by intercourse, regardless of their infectiousness, in order to quiet the fear that the infection has injured their virility. This, coupled with the primitive feeling that contact with a young virgin will restore virility by sympathetic magic, may be behind the superstitious, yet too often practiced, idea that intercourse with a virgin will cure the patient.[5]

Any person is shocked when he learns that he has acquired syphilis. The reaction to the shock depends on the extent to which he has become freed from his infantile, and now unconscious, ties to his parents. The syphilitic patient who opposes both diagnosis and treatment and who breaks public health rules does not do so because of pig-headedness or ignorance, but because his behavior is motivated by unconscious mechanisms over which he has little control. Such a patient needs a particular type of attention. Instead of coercive measures, which only accentuate his unconscious conflicts, he needs the development of an emotional relationship with his physician in order that he may accept the diagnosis and cooperate in the treatment and the preventive measures. The development of a positive type of relationship is as important for rapport between the syphilitic patient and his physician as it is in the early stages of psychiatric treatment. Many syphilologists owe their success to the ability to allow patients to develop this relationship with them. This is usually stated to be due to the personality of the physician, but it actually consists of his ability to listen to the patient's side of the story in an understanding and sympathetic manner, and of giving him the feeling that his physician is interested in him, not

4. This seems probable in many persons who acquire syphilis as a result of promiscuity. Such persons have been overattached to their mothers; in order to rid themselves of their desire for incest they tend to regard sexual relations as evil, filthy, etc., and they seek satisfaction from prostitutes. Because of the desire for an incestuous attachment to the mother, they fear punishment by the father, which is the loss of the genitals.

5. This idea exists also in regard to gonorrhea.

because he has syphilis, but because he is an interesting person with his own problems of life. The capacity to understand the individual is as necessary for obtaining the maximum success in syphilology as it is in psychiatry.

Reaction of the Married Syphilitic Patient.—Thus far the basis of the patient's over-reaction to syphilis has been discussed. The situation becomes more complicated if he is married. To his own apprehensions and anxieties is added the fear that the partner will learn of the difficulties. The patient is torn between his need to maintain his usual relationships in the family and his need to follow the regimen of treatment. Thus, to preserve his status in the family, it may be necessary for him to resort to dangerous compromises. The patient becomes once more a child, having to hide his guilty deed from the mother or father (the wife or husband becomes more and more a substitute for a parent as the patient resorts more and more to subterfuges, inconsistent explanations and falsehoods). This reactivates the infantile situation when the boy feels guilty toward his mother or the girl toward her father because of his or her incestuous desires. From the recrudescence of this infantile and now unconscious guilt, the patient comes to fear and blame the doctor—who acts as a father or mother substitute—for the predicament, exactly as the parent of the same sex was hated at the time of the guilty feelings. A hostile attitude develops toward the doctor, which may result in disbelief of the diagnosis, refusal to continue the treatment, refusal to pay the fees or in other forms of resistance. Similar feelings may be held toward the marital partner, with an increase of quarreling, bickering, fault-finding, etc., which eventually may lead to a marital rupture. This rupture may be really desired, because it eliminates the need for the subterfuges and falsehoods by which the patient has evaded his marital responsibilities. The final result, however, may be a permanent rupture of the marriage, even though the partner neither knows nor suspects the real cause. In such an instance, examination or treatment of the marital partner is almost impossible, and if the tension has reached a high degree, a proposal to do so may cause a divorce.

Reaction of the Marital Partner to the Knowledge of Syphilis.—If the diagnosis of syphilis comes as a shock to the patient, it comes with as great a shock to the marital partner. It is a blow to his pride and to his affection for the patient, because it indicates that the latter has been unfaithful and that the security of the marriage relationship is in question; the blame for the insecurity is placed on the patient, thus adding to his other difficulties. This is an obvious and well known fact that does not need to be dwelt on, except to point out that, whether the marital partner knows or does not know of the infection, the effect

of the tension in the home is bound to react deleteriously on the children. If the tension is prolonged to the point where a separation results, the development of the personality of the children will be definitely interfered with. The diagnosis of syphilis, however, reacts on the children in less tangible ways than those already sketched. Even if the marital partner consciously accepts the diagnosis, or if the infection has been acquired before marriage, the effects of the blow to the self-pride and love life of the partner may be exhibited unconsciously. There is an increasing liability to suspiciousness, a slight withdrawal of affection and a less happy and less adjusted marital life. If there are no children, the effect may not be noticeable. But if there are children, the situation is different. In certain instances it would seem that the attitude of the uninfected marital partner toward syphilis is transferred from the infected person to the children.

CASE 1.—A 10 year old boy[6] was referred by his mother because he was irritable, cantankerous, disobedient and cursed. The mother feared that these traits prophesied future misconduct. Although he was stubborn at home, she thought that he was easily led outside, and that he always seemed to select undesirable companions. She first noticed these traits about the time that her husband began to show similar traits (his change in personality was the first indication of dementia paralytica, for which he is now hospitalized). She thought that the boy resembled his father more than did the other children. She was greatly upset by the knowledge of her husband's illness, partly because she had given up many comforts and satisfactions to marry him and after her marriage had had to tolerate the domination of his mother, who objected to the marriage, and with whom they lived, and partly because she was uncertain when and how the condition was acquired since her husband had been guarded in his behavior, although he mingled with undesirable companions. Because of the boy's close resemblance to the husband, the mother began to notice and to criticise the traits that seemed to her to be similar. The boy began to feel disliked and unwanted by his mother, because whatever he did displeased her, and his behavior became increasingly difficult.

In this case the mother's pride and love life had been wrecked by the development of dementia paralytica in her husband. She feared that her eldest son, who resembled the father, would follow in his footsteps and bring further disappointment and trouble. In her endeavor to eradicate traits which were quite ordinary, but which seemed to her to resemble the traits that her husband showed in his illness, and also those that she blamed for his disease (being easily led and desiring to associate with undesirable companions), she became highly critical of everything that the boy did. As a result of her constant criticism the boy felt unwanted, and undesirable behavior developed.

CASE 2.—A similar case was that of a 12 year old boy whose father suffered from tabes. The latter had been a moral man, and had occupied a position of eminence in the community and the church. He considered his disease so shameful that he could hardly accept the diagnosis or antisyphilitic treatment, preferring to follow osteopathic and chiropractic advice. His symptoms began about the time of

6. In this and in the next case, examinations of the blood and of the spinal fluid and provocative tests showed negative results for syphilis.

the birth of his son. As the son grew past babyhood, everything that the average boy does was considered undesirable and perhaps symptomatic of inherited syphilis. As a result, the boy had been so criticized that he was almost unable to distinguish acceptable from unacceptable behavior, and he felt unwanted; in consequence, his behavior became difficult. In this case the shame and disgrace felt by both the father and the mother were reflected on the boy as apprehensiveness, and because of this apprehensiveness the development of personality in the boy was hampered.

In both of these cases the children did not suffer from syphilis, but the psychologic effect of their father's disease affected their happiness and their development of personality. The parents of both really suffered from syphilophobia, not for themselves but for their children, and because the situation became an obsession, no amount of reassurance as to the absence of the disease in the children had the slightest effect.

Both of the parents were aware of the existence of the disease in the affected marital partner. The situation becomes more serious when the existence of the disease is known only to one and that one endeavors to conceal the knowledge for fear the unknowing partner will desire separation if he learns of it. In such a situation every illness, blemish or activity of the child will be regarded with dread lest it convey knowledge of the disease. Difficult as this situation is if the child be uninfected, it becomes ten times more difficult if the child suffers from congenital syphilis.

Case 3.—A 5 year old boy was referred because he was overactive, unmanageable, disobedient, destructive, had tantrums and stuttered. He was distinctly a problem child, and his behavior seemed to be the result of the conflicting methods of handling used by the parents. The father tended to indulge him. He was an elderly man, married late in life, and the boy was the eldest child. With the father, the boy behaved fairly well; with the mother, his behavior was annoying. She nagged, punished him constantly, whipping him three or four times a day; nothing that he did pleased her. She said there were times when she actually hated him. The fear of syphilis underlay this attitude. This was her second marriage. She had been infected by her first husband, who died of dementia paralytica, and she was treated with pills until she thought that she was cured. She also had the idea that child-bearing was impossible for a syphilitic person. Under these assumptions, she married again and did not tell her husband that she had been infected. Of course, she was upset when she became pregnant; after the child was born, she began to worry lest he would have syphilis. Within a short time after the birth of the boy she became pregnant again, and during this pregnancy a Wassermann test was made, and the reaction was positive. She received treatment during the pregnancy, but the knowledge of her condition increased her worry about the boy. Frequently she would be in a panic of fear lest he had syphilis, and she began to see in his every act evidence of the disease. Soon she added to her fear that he had syphilis the fear that he would become a criminal. As a result of her anxiety, she became highly critical of the child, her attitude conflicting with that of her husband.

Physical examination of the child revealed a normal boy, except for choreiform movements that were the results of emotional tension and not of an organic condi-

tion. The Wassermann reaction was strongly positive. The immediate question was, what should be done about the treatment? The mother was in such panic from fear that to tell her would have precipitated either an increased hatred of the child or a serious reaction. The father knew nothing of the condition of either the wife or the boy, and she refused to have him informed lest he would leave her. As there were many other factors in the situation that were contributing to her upset condition, it was deemed wiser to postpone treatment for the child until an attempt to remedy these had been made. This was attempted, and the tensions within the family were ameliorating when she died suddenly. This left an even more difficult situation. The father knew nothing of the infection of his wife or son, and unless he knew, treatment could not be given to the boy. Again a preliminary period was spent in helping him with his difficulties and building up his faith in the clinic contact. When this was done, he was informed. He refused to believe it at first (had he been told earlier, there is no question but that his disbelief would have been final; he would have broken all connection with the clinic, and no treatment would have been given to the boy). Contact was strong enough, however, so that he finally accepted the situation after a short period of disbelief, and he carried through the treatment faithfully.

In this instance, the statement of the diagnosis and an attempt to inaugurate treatment for the child when a positive Wassermann reaction was found would have defeated the desired end. The mother's anxiety would have become acute. Her hatred of the child because he symbolized her disease and thus was a threat to her security with her husband would have increased. She would have either concealed the diagnosis and placed the child in a corrective institution or turned the hatred to the clinic, refusing to believe the diagnosis and doing nothing about the treatment. The father would have persisted in his disbelief of the diagnosis, and he would have refused to have the child treated. Treatment directed first to relieving the tensions in the total situation and in making the family see that the clinic was really interested in them as individuals accomplished its end of securing adequate antisyphilitic treatment for the child more successfully than a less circuitous method would have done. It was necessary to view the situation from all angles and, with the ultimate purpose of giving adequate treatment to the child, to work through several preliminary stages of treatment of the whole situation. If this had not been done, the boy would not have received treatment as early as he did, or perhaps not at all.

COMMENT

In the truest sense, syphilis is a social disease. Associated as it is with the person's most fundamental sex conflicts, its psychologic effects strike at the anxieties and fears connected with these and at all expressions of the sex instinct, including marital relationships and parental attitudes to children.

Thus a double responsibility is placed on the syphilologist. Not only must he deal with the disease and the physical idiosyncrasies of

the patient to treatment, but in order that treatment may be carried to a successful conclusion and that the social state of the patient may be left in an adjusted condition, he must deal with the psychologic and social effects. In the first case cited, the personality of the boy was hindered by the mother's anxiety. Her husband had been taken from her because traits of his personality led him to contract the disease. To her the boy showed traces of similar characteristics, and she wanted to save him from the same result. If she had found some one who was interested in her difficulties when she first learned the diagnosis, into whose ear she could have poured her feelings about the disease, her husband and her mother-in-law, and who, following this unburdening, would have discussed fully with her all of the aspects of the disease, her tensions and anxieties would have been lessened, and she would have had a more wholesome attitude toward her son. Perhaps, also, if when he first noticed the disease, the father had been able to consult some one who would have discussed his condition with him in such a way that he would have felt less conflict between the fact that he had syphilis and his desire to appear a moral person, he would have taken sufficient treatment and would never have suffered from dementia paralytica.

The same thing is true in the second case. The father did get advice at the time when he noticed the primary lesion, but the physician took no account of the way this man with his high moral standards would feel about the diagnosis. Consequently, he did not take treatment, and tabes developed. If the physician had taken into consideration his patient's characteristics, the latter would have taken treatment, and he would have had the feeling that his physician was dependable because he understood the whole situation. Later he would have consulted the physician about his son, and because he had some one with whom he could discuss his fears and anxieties, his attitude toward the boy would have been less tense. As a consequence, the development of the boy's personality would have proceeded in a more wholesome manner.

The third case contained all the potentialities for acute disagreement between husband and wife: separation, a broken home and the effects of the broken or breaking home on the children. It needed but a spark to set off a social explosion far-reaching in its results; this spark would have been furnished by a brutally frank diagnosis. Only by viewing not only the infected boy but the whole situation, including the infected boy, the father and the mother and their interrelationships, was it possible to prevent a catastrophe and to effect adequate treatment for the syphilitic child.

The syphilologist has two responsibilities of equal importance: first, the adequate and proper treatment for the disease; second, the treatment of the syphilitic patient. One cannot be carried to a successful

conclusion without the other. In order to accomplish both aims, the syphilologist must remember that he is dealing with a human being whose fears and anxieties bear a definite relationship to treatment. He must attempt to understand this human being and his total situation, endeavor to ascertain why he reacts as he does, and institute the treatment that will bring the maximum results. Only by understanding and viewing the total situation, the patient as well as the disease, can the physician attain the cooperation that he desires.

LV.—A STUDY OF THE STIMULATING EFFECT OF SMALL DOSES OF THALLIUM ACETATE ON THE RATE OF THE GROWTH OF HAIR IN THE ALBINO RAT*

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Within recent years thallium acetate has been rather widely used as a depilatory agent in mycotic diseases of the scalp. Its use in this field has been limited, however, because of the high toxicity of the drug, and also because of the fact that it can be used with safety only for children who have not yet reached the age of puberty. The dose used to produce depilation in human beings is 0.008 Gm. per kilogram of body weight, but in experimental animals the depilatory dose is usually higher. In rats falling of the hair occurs as a result of the administration of doses of from 0.014 to 0.018 Gm. of thallium acetate per kilogram of body weight.

Although thallium acetate has heretofore been used almost exclusively for depilatory purposes, it was thought that very small doses might produce the reverse effect, that of stimulating the rate of the growth of hair. The production of such diametrically opposite effects by the use of a single drug is not unknown. For example, small doses of benzene increase the number of red blood corpuscles, while large doses diminish it. Consequently, the present study was undertaken in an attempt to determine whether any stimulation of the growth of hair could be demonstrated experimentally after the administration of very small doses of thallium acetate.

REVIEW OF THE LITERATURE

The element thallium was discovered in 1861 by Sir William Crookes, when he was extracting selenium from the seleniferous deposit of a sulphuric acid factory. The residue was supposed to contain tellurium, but when examined spectroscopically a bright green line foreign to all the known spectra was observed. This was attributed to a new

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* This work has been financed by an anonymous grant to Washington University for the study of hair.

* Studies, observations and reports from the Dermatological Departments of the Barnard Free Skin and Cancer Hospital and the School of Medicine, Washington University, St. Louis, Mo., U. S. A., service of Dr. M. F. Engman and Dr. W. H. Mook.

element, which was named thallium. Thallium does not occur free. It is an essential constituent of the rare mineral crookesite, and spectroscopic indications of thallium have been found in many rocks—cuperiferous pyrites, marcasite and zinc blends. Böttger [1] found thallium widely diffused in the vegetable kingdom—in wine, chicory, tobacco, beet root and beech wood. Its chief sources, however, are the products derived from thalliferous ores, such as the lead chamber deposits and the flue dust of furnaces roasting thalliferous pyrites.

The chemical character of thallium presents striking peculiarities. As an elementary substance it is similar in its physical properties to lead; it resembles lead chemically, since it forms an almost insoluble chloride and an insoluble iodide. However, in most of its properties the hydroxide of thallium comes close to the alkali metals (sodium and potassium). Thallium forms two series of salts, thallous and thallic compounds, in which the element is, respectively, univalent and tervalent.

Thallium was first introduced into medicine about twenty years ago. It was at one time used to some extent in the treatment for syphilis in doses of 1/6 grain (0.01 Gm.) once or twice a day. According to Pozzi and Courtrade,[2] it had a beneficial influence on the infection, but caused such irritation in the stomach that its use was abandoned. The sulphate has been used in 1 per cent solution in cases of cystitis, and Combemale [3] advocated the use of thallium acetate for the arrest of night sweats in phthisis. Since, however, thallium is an active poison, being slightly more toxic than arsenic, and is distinctly accumulative in its effect, its use has been limited. In large doses thallium salts induce stomatitis and diarrhea (perhaps hemorrhagic), with stimulation of the heart followed by depression.[4] Diuresis and albuminuria sometimes occur.[5]

Thallium is readily absorbed by the body. After the administration of the drug, Marmé [6] found thallium in the urine, the gall, the milk,

1. Böttger, R., quoted by Mellor, J. W.: A Comprehensive Treatise on Inorganic and Theoretical Chemistry, London, Longmans, Green & Company **5**:408, 1924.

2. Pozzi and Courtrade, quoted by Solis-Cohen, S., and Githens, T. S.: Pharmacotherapeutics, New York, D. Appleton & Company, 1928, p. 722.

3. Combemale, J.: L'acétate de thallium contre les sueurs nocturnes de phthisiques, Bull. Acad. de méd. **39**:572 (May 17) 1898.

4. Curci: Ricerche sperimentali sull'azione biologica del tallio, Ann. di chim. e di farm. **22**:395, 441 and 481, 1895.

5. Solis-Cohen, S., and Githens, T. S.: Pharmacotherapeutics, New York, D. Appleton & Company, 1928, p. 722.

6. Marmé, quoted by Hecke, F.: Die Thalliumvergiftung und ihre histologischen Veränderungen bei Ratten, Virchows Arch. f. path. Anat. **269**:28 (July 28) 1928.

the lacrimal fluid, the saliva, the secretions of the stomach, the pericardial fluid and especially in large quantities in the musculature. Schee [7] made similar observations. After the administration of thallium he found the metal in large quantities in the stomach, the intestine, the muscles and the fat. In smaller quantities thallium was found in the heart, lungs, liver, spleen, kidneys and bone and in traces even in the blood. The skin retains relatively little thallium, however (Dixon [8]).

Even comparatively light doses fed to young animals lead to stunted growth and symptoms of cretinism, presumably through injury of the thyroid gland (Spitzer [9] and Buschke and Peiser [10]).

Sabouraud,[11] as early as 1897, accidentally observed that the use of a thallium salt by mouth produced a falling of the hair of the scalp. He was also the first to perform experiments in regard to the usefulness of this drug in the treatment for tinea of the scalp. Cicero [12] used thallium in the treatment for tinea of the scalp in children in the Mexican Special School for Children with Mycotic Diseases as early as 1909, and in 1918 presented before the Mexican Academy of Science his favorable report based on the treatment of 459 patients. Since that time the use of thallium acetate in the treatment for mycotic diseases of the scalp in order to remove the hair has become quite widespread. Successful results have been reported by Urueña [13] (200 cases), Devane [14] (45 cases), Earle [15] (26 cases), Fabre [16] (16 cases), Felden [17]

7. Schee, J., quoted by Hecke (footnote 6).

8. Dixon, W. E.: Thallium, Proc. Roy. Soc. Med. **20**:77 (March 17) 1927.

9. Spitzer: Thallium Salzen auf Haarwachstum, Deutsche med. Wchnschr. **48**:614, 1922.

10. Buschke, A., and Peiser, B.: Die Wirkung des Thallium auf das endokrine System, Klin. Wchnschr. **1**:995 (May 13) 1922.

11. Sabouraud, R.: Entretiens dermatologiques, Paris, Octave Doin et fils, 1913, p. 432.

12. Cicero, R., quoted by Peter, G.: Die Epilation mit Thallium-Acetic Oxydulation, Arch. f. Dermat. u. Syph. **150**:438 (July 1) 1926.

13. Urueña, quoted by Buschke, A.; Langer, E., and Peiser, B.: Die Epilation bei Haarpilzerkrankungen mittels Thalliumazetat und ihre experimentelle Begründung, Dermat. Wchnschr. **83**:971 (July 3) 1926.

14. Devane, J.: New Method of Epilation in Tinea Tonsurans: Report of Forty-Five Cases of Epilation by Thallium Acetate, M. Press **124**:95 (Aug. 3) 1927.

15. Earle, C. A.: Ringworm of the Scalp, Arch. Dermat. & Syph. **18**:119 (July) 1928.

16. Fabre, M.: L'acétate de thallium dans le traitement des teignes, Bull. Soc. franç. de dermat. et syph. **36**:1177 (Dec.) 1929.

17. Felden, B.: Epilation with Thallium Acetate in Treatment of Ringworm of the Scalp in Children, Arch. Dermat. & Syph. **17**:182 (Feb.) 1928.

(47 cases), Kleinmann [18] (114 cases), Percival [19] (50 cases) and many others. The dose commonly used for depilatory purposes is 0.008 Gm. of thallium acetate per kilogram of body weight. As has been previously mentioned, it can be used with safety only for children who have not yet reached the age of puberty.

Since thallium has such a striking and peculiar effect on the hair, great interest has centered about the mechanism through which these effects are brought about. Three possible explanations have been advanced as to how the drug acts in bringing about its effects: (1) local action on the papilla of the hair, (2) action on the endocrine-sympathetic system and (3) action on the central nervous system.

Truffi [20] was one of the chief advocates of the theory that thallium produces its effect through the direct action of the drug on the hair follicle. In his experiments, he administered thallium to rats, rabbits, guinea-pigs and cats and produced a falling of the hair. By histologic examination of the skin from the affected regions, he found degeneration of the hair follicles and sclerosis of the connective tissue. He found no histologic evidence of lesions in the endocrine glands in animals treated with a dose of from 0.0015 to 0.002 Gm. of thallium acetate and epilated.

Buschke and his fellow-workers,[21] however, were strongly opposed to Truffi's theory. In a series of papers published in 1922 and the following years, they arrived at the conclusion that the thallium salts act through the endocrine glands. They found decalcification of bone, disturbance of calcium metabolism and cataract in about 10 per cent of the animals that had been given thallium. This they believed to be evidence of the involvement of the parathyroid glands. In some cases they showed an atrophy of the follicles of the thyroid gland and a flattening of the epithelium after the administration of thallium. In young animals the retardation of growth, and in adult animals the atrophy of the testis, the inhibition of the sexual function and the development of a senile aspect point to an involvement of the sex organs and

18. Kleinmann, H.: Thallium Epilation in Scalp Mycosis, Med. Klin. **22**:1761 (Nov. 12) 1926.

19. Percival, G. H.: Treatment of Ringworm of the Scalp with Thallium Acetate, Brit. J. Dermat. **42**:59 (Feb.) 1930.

20. Truffi, G.: Ueber die biologische Wirkung des Thallium-Azetats, Dermat. Wchnschr. **88**:409 (March 16) 1929.

21. Buschke, A., and Peiser, B.: Dell'azione biologica dell'acetato di tallio, Gior. ital. di dermat. e sifil. **70**:585 (June) 1929; abstr., Arch. Dermat. & Syph. **20**:524 (Oct.) 1929. Buschke, A.; Loewenstein, L., and Joel, O. W.: Die spezifischen und unspezifischen Wirkungen des Thalliums, Med. Klin. **25**:462 (March 22) 1929.

possibly of the hypophysis. They also showed that thallium has an inhibiting effect on the rutting cycle of the mouse,[22] but in later work they found that this effect is not specific for thallium as are falling of the hair and some of the other symptoms, for lead and arsenic were also found to have an inhibiting effect on the ovarian cycle.

Other workers also found that thallium produces effects on the endocrine glands, which they believe to be in turn responsible for the effects of thallium on the hair. In experimental work on guinea-pigs and rabbits, Pardo-Castello [23] found atrophy of the thyroid and adrenal glands after the administration of thallium. Leigheb [24] reported changes in the thyroid glands. Wen-Chao Ma and Jui-Wu Mu [25] made a study of the effects of thallium acetate on the Golgi apparatus and mitochondria (which are the most vital cellular elements known) in cells of the thyroid gland and in the spinal ganglion cells. Over a period of five weeks after the injection of a single dose of 0.008 Gm. of thallium acetate per kilogram of body weight, they found marked changes in these cellular elements, together with a change in the staining properties of the colloid secretion of the thyroid vesicles from basophilic to acidophilic. Gradually these effects began to disappear, and complete recovery took place six weeks after the injection. Jui-Wu Mu and Ch'han-Kuei Hu [26] found that injections of 0.008 and 0.012 Gm. of thallium acetate per kilogram of body weight into rats caused a definite but transitory diminution of the basal metabolic rates between the second and eleventh weeks after the administration of the drug. The diminution was more marked and more persistent after the use of the larger dose. These observations, together with the morphologic cellular changes in the Golgi complex and the mitochondria of the thyroid gland, they believe, indicate the direct action of thallium on the thyroid gland.

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22. Buschke, A.; Zondek, B., and Berman, L.: Der hemmende Einfluss des Thalliums auf den Brunstzyklus der Maus, Klin. Wchnschr. **6**:683 (April 9) 1927. Buschke, A., and Berman, L.: Weitere Untersuchungen über die Wirkung von Metallsalzen auf den Brunstzyklus der Maus, München. med. Wchnschr. **74**:969 (June 10) 1927.

23. Pardo-Castello, V.; Mestre, J. J., and Rio, E.: Tinea of the Scalp, Arch. Dermat. & Syph. **19**:409 (March) 1929.

24. Leigheb, V.: Ricerche sperimentali sulla intossicazione da tallio, Gior. ital. di dermat. e sifil. **69**:960 (June) 1928; abstr., Arch. Dermat. & Syph. **19**:295 (Feb.) 1929.

25. Ma, W. C., and Mu, J. W.: Cytological Changes in Thyroid Apparatus and Spinal Ganglia of Rats Treated with Thallium, Proc. Soc. Exper. Biol. & Med. **27**:249 (Jan.) 1930.

26. Mu, J. W., and Hu, C.: Effect of Thallium Acetate on the Basal Metabolism of Rats, Proc. Soc. Exper. Biol. & Med. **27**:251 (Jan.) 1930.

Buschke [27] found also that thallium exercises an antihydrotic action that is followed by a state of dryness of the skin. This is one of the first effects of thallium, and Buschke expressed the belief that it is an indication of the intervention of the sympathetic nervous system. Moreover, only the hairs that are innervated by the sympathetic nervous system are affected by thallium, while those that are dependent on the central nervous system, such as the vibrissae of animals and the inner portion of the eyebrows in man, do not fall.[28] These facts are considered to be further evidence that thallium produces its effects on the hair through its action on the sympathetic nervous system.

Cortella,[29] however, is an advocate of the theory that thallium attacks especially the central nervous system, and that its other effects, such as those on the hair, are secondary. He found extensive degenerative and inflammatory changes in the central nervous system following the administration of thallium. Bochkevitch and Prokoptchouk [30] investigated the effect of thallium on the nervous tissue of the guinea-pig and cat. They found that in the dose of 0.008 Gm. per kilogram of body weight, thallium acetate produced edema and petechial hemorrhages in the brain and spinal cord.

From this survey of the literature it will be seen that little is positively known about the action of thallium acetate. One fact alone stands out: Thallium in relatively large doses produces a falling of the hair. Little is known concerning the effects produced by minute doses of thallium acetate. Vague suggestions are found in the literature of the possibility of a stimulating effect of thallium acetate in very small doses. Abramowitz [31] reported the case of a boy, 5 years of age, suffering from alopecia areata, whose scalp had become absolutely bald about seven months prior to presentation. He was given 0.003 Gm. of thallium acetate per kilogram of body weight, and in three weeks after the administration of the drug, the hair was found to be growing on the

27. Buschke, A.: Ueber die antihydrotische Wirkung des Thallium, Klin. Wchnschr. **2**:1698 (Sept. 3) 1923.

28. Buschke, A., and Peiser, B.: Thalliumalopecie und Sinneshaare, Klin. Wchnschr. **5**:977 (May 28) 1926.

29. Cortella, E.: Ricerche sulle alterazioni del sistema nervoso centrale nell' intossicazione da acetato di tallio: Nota preventiva, Gior. ital. di dermat. et sifil. **69**:1167 (Aug.) 1928; abstr., Ann. de dermat. et syph. **10**:112 (Jan.) 1929; Nuovo contributo alle ricercho sulle alterazioni del sistema nervoso centrale nella intossicazione da acetato di tallio, Gior. ital. di dermat. e sifil. **69**:1597 (Dec.) 1928; abstr., Ann. de dermat. et syph. **10**:437 (April) 1929.

30. Bochkevitch, M., and Prokoptchouk, A.: Psychose épileptiforme après acétate de thallium, Ann. de dermat. et syph. **10**:383 (April) 1929.

31. Abramowitz, E. W.: Alopecia Areata Treated with Thallium Acetate, Arch. Dermat. & Syph. **19**:485 (March) 1929.

scalp. Buschke and Davies [32] also used it with some success in cases of alopecia. Dixon,[8] Dowling [33] and Solis-Cohen [5] mentioned, incidentally, that thallium in small doses may have a stimulating effect on the rate of the growth of hair, but apparently no careful and systematic study of the effects of minute doses of thallium acetate has been made heretofore.

MATERIALS AND METHODS

The albino rat was the experimental animal chosen for the present studies. The rat can tolerate from 0.016 to 0.018 Gm. of thallium acetate per kilogram of body weight, but marked changes in the coat of hair occur when such large doses of the drug are administered. The coat becomes rough, and a general falling of the hair over the entire body follows. Some areas may become entirely denuded. Since doses of thallium acetate that will stimulate the growth of hair are thought to be much smaller than those that produce depilatory effects, doses of 0.002, 0.004 and 0.006 Gm. of thallium acetate per kilogram of body weight were used in these experiments. No ill effects on the general health or on the hair were observed after the administration of these amounts. Doses of 0.002 Gm. of thallium acetate (Merck) per kilogram of body weight were given to nineteen rats, doses of 0.004 Gm. to twenty-four rats and doses of 0.006 Gm. to twenty-three rats. Twenty-five rats were used as controls. The dose of thallium acetate was dissolved in 0.5 cc. of distilled water and was injected intraperitoneally.

At the time of the injection, the hair was shaved from an area of skin 1.5 cm. in width by 2 cm. in length lying just to the left of the middorsal line on the rump of the animal. The hair was removed by clipping it with fine scissors under a dissecting microscope. While the hair was growing back over this area, twenty-five hairs chosen at random were measured regularly every three days. Measurements were continued for from four to six weeks depending on the length of time required for the complete regrowth of the hair in this area. Measurements were made on approximately 22,000 hairs during the course of the experiment. The hair was measured by means of a glass capillary, graduated in 2 mm. intervals, into which the hair was inserted. This type of capillary was described by Dawson.[34]

EXPERIMENTAL WORK

Doses of 0.002 Gm. of thallium acetate per kilogram of body weight were dissolved in 0.5 cc. of distilled water and injected intraperitoneally into nineteen adult rats ranging in weight from about 80 to 200 Gm. The area in which the hair was to be measured was shaved at the time of administration of the dose, care being taken to select as nearly comparable areas as possible on each rat. The area was examined on the third day after shaving, and any hairs of sufficient length were measured.

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32. Buschke and Davies, quoted by Peiser, B.: Haarregeneration und Thallium, Dermat. Wchnschr. **87**:1378 (Sept. 29) 1928.

33. Dowling, G. B.: Ringworm of the Scalp Treated by Thallium Epilation, Proc. Roy. Soc. Med. **20**:71 (Feb. 17) 1927.

34. Dawson, H.: Hair Growth in the Guinea-Pig, Am. J. Anat. **45**:461 (May) 1930.

Every three days thereafter measurements of the growing hairs were made, twenty-five hairs being selected at random for measurement. The mean lengths of these hairs were calculated for each day's measurements.

In the first column of table 1, the daily rates of regrowth of the hair for the nineteen rats receiving doses of 0.002 Gm. of thallium acetate per kilogram of body weight are presented, arranged from lowest to highest rates. These figures were obtained by dividing the greatest mean daily length of the hairs measured by the number of days required for the hairs to attain this length. The mean daily rate

TABLE 1.—*Mean Daily Rate of the Growth of Hair in Millimeters Per Day in Treated and Control Rats*

	Rats Receiving Doses of Thallium Acetate			
	0.002 Gm. per Kg.	0.004 Gm. per Kg.	0.006 Gm. per Kg.	Controls
1	0.130	0.174	0.323	0.018
2	0.146	0.244	0.332	0.140
3	0.243	0.268	0.412	0.185
4	0.302	0.369	0.418	0.212
5	0.320	0.377	0.429	0.226
6	0.332	0.427	0.446	0.268
7	0.365	0.459	0.462	0.291
8	0.383	0.526	0.470	0.319
9	0.424	0.526	0.486	0.355
10	0.491	0.530	0.489	0.441
11	0.517	0.534	0.506	0.487
12	0.527	0.549	0.515	0.502
13	0.553	0.562	0.545	0.509
14	0.583	0.563	0.550	0.527
15	0.599	0.566	0.568	0.528
16	0.623	0.586	0.574	0.549
17	0.641	0.597	0.590	0.555
18	0.644	0.619	0.601	0.562
19	0.649	0.631	0.608	0.563
20	.....	0.637	0.609	0.575
21	.....	0.652	0.625	0.633
22	.....	0.744	0.671	0.643
23	.....	0.839	1.162	0.644
24	.....	1.078	.....	0.698
25	.....	.....	.....	1.020
Mean	0.441	0.542	0.542	0.457

of growth for all the rats receiving a single dose of 0.002 Gm. of thallium acetate per kilogram of body weight is shown at the foot of the column (0.441 mm. per day).

In column 2 of table 1, similar data are presented for twenty-four rats that received intraperitoneal injections of 0.004 Gm. of thallium acetate per kilogram of body weight, dissolved in 0.5 cc. of distilled water and injected intraperitoneally. The weights of these rats varied from 75 to 200 Gm. Areas similar to those described for the rats receiving doses of 0.002 Gm. of thallium acetate were shaved, and twenty-five hairs chosen at random were measured at intervals of three days until complete regrowth of the hair in this area had occurred. The figures presented in column 2 are the mean rates of growth in millimeters per day for each rat. The mean daily rate of growth for all

twenty-four rats (0.542 mm. a day) is given at the bottom of the column.

Column 3 of table 1 presents the mean daily rate of growth for the twenty-three rats receiving doses of 0.006 Gm. of thallium acetate per kilogram of body weight. The weights of these rats varied from 70 to 220 Gm. Areas such as those previously described were shaved, and twenty-five hairs selected at random were measured at intervals of three days. The mean daily rate of growth for this group of rats (0.542 mm. a day) is given at the foot of the column.

Similar data are presented for the twenty-five control rats in column 4 of table 1. These rats were shaved in the same way as were the treated animals, but no thallium acetate was administered. Again twenty-five hairs at random were measured at intervals of three days, and the mean daily rate of growth for each rat is presented in the table.

TABLE 2.—*Percentage Increase in the Rate of the Growth of Hair in Treated Over Control Rats*

Dose of Thallium Acetate Received, Gm. per Kg.	Rate of Growth of Hair in Mm. per Day	Increase in Rate of Growth of Hair, per Cent
0.002	0.441	—
0.004	0.542	18
0.006	0.542	18
Control	0.457	

The mean daily rate of growth for the twenty-five rats is 0.457 millimeters a day.

Thus, doses of 0.004 and 0.006 Gm. of thallium acetate per kilogram of body weight seem to produce some stimulation of the rate of the growth of hair. The amount of stimulation produced by these two dosages is the same. Doses of 0.002 Gm. of thallium acetate per kilogram of body weight apparently have no stimulating effect. The mean daily rate of growth for the animals receiving this dose is even slightly lower than that of the controls. Table 2 summarizes these results. The daily rates of growth for the three groups of treated animals are shown in column 2, together with the rate of growth of the controls. The percentage of increase in the rate of the growth of hair for the two groups that show an increase in their rates of growth (those receiving doses of 0.004 and 0.006 Gm. of thallium acetate per kilogram of body weight) is presented in column 3. An 18 per cent increase in the rate of the growth of hair has been found following the administration of single doses of 0.004 and 0.006 Gm. of thallium acetate per kilogram of body weight.

COMMENT

The results obtained seem to justify the conclusion that small doses of thallium acetate do produce some stimulation of the rate of the growth of hair. No increase in the rate of growth was demonstrable with the smallest dose of thallium acetate used (0.002 Gm. per kilogram of body weight), but it is possible that these amounts were so small as to be negligible. The fact that the mean daily rate of growth for these rats (0.441 mm. per day) is so near that of the controls (0.457 mm. per day) would seem to indicate that this dose was too minute to produce any effect. Doses of 0.004 and 0.006 Gm. of thallium acetate per kilogram of body weight produced an 18 per cent increase in the rate of the growth of hair. Although this is not a great degree of stimulation, it is noteworthy, because few or no other agents are known that have any effect on the rate of the growth of hair. The degree of stimulation produced by 0.004 Gm. of thallium acetate per kilogram of body weight and that produced by 0.006 Gm. per kilogram were found to be identical. It is possible, however, that the upper limits of the dosage that will produce stimulation of the growth of hair have not been reached.

Little can be said concerning the manner in which thallium acts in bringing about these effects. It will be interesting to attempt to determine, however, whether the stimulating effects of this drug are limited to the hair, or whether other epithelial structures are likewise stimulated by the administration of small amounts of thallium.

SUMMARY

1. Single doses of 0.004 and 0.006 Gm. of thallium acetate per kilogram of body weight, dissolved in distilled water and injected intraperitoneally into white rats produced a stimulation of 18 per cent in the rate of the growth of hair.

2. Doses of 0.002 Gm. of thallium acetate per kilogram of body weight were too small to produce any effect on the rate of the growth of hair.

HYPERSENSITIVITY TO TRICHOPHYTIN IN THE CASUAL DERMATOLOGIC PATIENT

A STUDY OF ONE HUNDRED AND TWO CASES *

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The experiments of Bloch,[1] demonstrating allergic phenomena of the skin in animals after fungus infections, were soon followed by the observation of trichophytids in human beings by J. Jadassohn.[2] Clinical and experimental evidence has shown that these eruptions are akin to the tuberculids, and are secondary to the hematogenic transport of fungi (or possibly also of toxins) to the allergic skin from a primary focus.

A sine qua non for the existence of trichophytids is a positive trichophytin reaction. This has been said to occur usually in the deep inflammatory fungus infections such as kerion celsi or sycosis parasitaria profunda. It has been shown, however, that a positive trichophytin reaction with development of epidermophytids is a frequent occurrence in epidermophytosis of the feet, which is a relatively superficial infection.[3] This was confirmed in a large number of cases.[4] We are of the opinion that the high incidence of trichophytin allergy in these cases is perhaps explained by the fact that the most common causative organism, *Epidermophyton* Kaufmann-Wolf, has very strong allergy-producing properties. In an experimental reproduction of epidermo-

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1. Bloch, B.: Handb. d. Haut- u. Geschlechtskr. **11**:565, 1928.

2. Jadassohn, J., cited by Bloch (footnote 1).

3. Jadassohn, W., and Peck, S. M.: Arch. f. Dermat. u. Syph. **158**:16, 1928.

4. Peck, S. M.: Epidermophytosis of Feet and Epidermophytids of Hands: Clinical, Histologic, Cultural and Experimental Studies, Arch. Dermat. & Syph. **22**:40 (July) 1930. Broeckema, J. H.: Dermat. Wchnschr. **91**:1014 (July 12) 1930. Sulzberger, M. B., and Lewis, G. M.: Trichophytin Hypersensitiveness Demonstrated by Contact Tests: Preliminary Report, Arch. Dermat. & Syph. **22**:410 (Sept.) 1930.

phytosis of the feet with this fungus, the trichophytin reaction became positive thirteen days after the beginning of the experiment.[5]

Bearing in mind the large number of mycotic infections of the feet among the people of this country, we thought that it would be of great interest to study the incidence of trichophytin allergy in the casual dermatologic patient. If a relatively large number of those examined gave a positive reaction, it would stress the importance of the consideration of those eruptions of the skin that were of obscure etiology as epidermophytids. This would apply especially to the eczematoid, vesicular or toxic type of manifestations of the skin, whether generalized or localized.

METHOD OF STUDY

One hundred and two cases were studied. We attempted to eliminate those in which treatment was being given primarily for fungus infections.

Trichophytin Reactions in One Hundred and Two Intradermal Tests

Age	Number Examined	Trichophytin Reaction				
		0	±	+	++	+++
9	3	3	..	..	..	..
11 to 15	4	1	1	1	..	1
16 to 20	8	3	1	2	1	1
21 to 30	22	5	3	5	6	3
31 to 40	30	7	..	11	8	4
41 to 50	12	1	1	5	3	2
51 to 67	23	7	2	8	5	1
Total	102	27	8	32	23	12

The trichophytin used in all of the cases was that made in Bloch's clinic in Zürich from *Achorion quinckeanum;* previous experience had proved its specificity.[6] In fifty-nine of the cases, trichophytin Hoechst was used concomitantly. As a control for both, maltose bouillon containing 0.5 per cent phenol was used.

The trichophytin of Hoechst was used in full concentration in thirty-eight cases and in dilutions of 1:50 in twenty-one. All the cases were tested intradermally; in sixty-one, patch tests and Pirquet's tests with trichophytin were done at the same time.

The intradermal test was made by injecting 0.1 cc. as for the Schick test. The scratch test was done with the technic used for Pirquet's test. The patch test was done according to the method of Bloch and Jadassohn: A small piece of gauze saturated with trichophytin was placed on the skin; this, in turn, was covered by gutta-percha and the whole sealed off with adhesive tape. The patch was removed after twenty-four hours.

The grading of the results of the tests is explained in the following paragraphs:

(*a*) *Intradermal Test.*—One plus indicates an area of redness from 1 to 2 cm. in diameter, with very little infiltration; two pluses, an area of redness from 2 to 3 cm., with infiltration and formation of papules; three pluses, an area of redness and infiltration of more than 3 cm. with formation of papules and vesicles.

5. Peck (footnote 4, first reference).

6. Jadassohn and Peck (footnote 3). Peck (footnote 4, first reference).

(*b*) *Scratch Test.*—The reactions obtained were on the whole not very marked, and we designated as positive only those in which there was a papule at least 0.5 cm. in diameter from twenty-four to forty-eight hours after the test was made and practically nothing at the control site. There was no attempt at grading.

(*c*) *Patch Tests.*—Reactions to these tests were graded according to the method of Bloch. The intradermal test was always done on the outer surface of the right upper arm, the scratch test on the flexor surface of the left forearm, and the patch test on the dorsum in the area between the shoulder blades.

The reactions were followed for at least forty-eight hours and graded at that time. In our experience, this is the best time for the reading, because in the first twenty-four hours a pseudoreaction will have subsided. The site of a positive trichophytin reaction may remain for many days as a hyperpigmented scaling area.

In forty-eight cases, microscopic examination of any lesions on the feet were made. We did not attempt to obtain cultures. The relatively few positive microscopic observations of fungi probably depended on the little time that could be given the individual case and the fact that no cultural studies were made.

COMMENT

Sutter,[7] working under Bloch in Basel, tested one hundred and fifty healthy persons for trichophytin allergy by intradermal injection. He found the reactions to be very strongly positive in five, strongly positive in eighteen, moderately positive in fifty-five, weakly positive in forty-five and negative in twenty-seven. The persons between 15 and 25 years of age gave the greatest number of positive reactions.

Bloch [1] pointed out that one should be very careful in interpreting such results, because of the possibility of pseudoreactions; especially is this important in view of the fact that Sutter used an endotrichophytin which was very strong in its reaction-producing tendencies. While this possibility should be considered, especially when one sees the results of our experiences with the concentrated trichophytin of Hoechst, we do not believe that this has to be feared in the series of cases investigated.

Each of the patients was tested with the Zürich trichophytin, which has been found to be specific when tested in a large number of healthy persons as well as in some with fungus infection.[5] Those patients who were tested by the diluted trichophytin of Hoechst (as per directions) and with the Zürich trichophytin showed parallel reactions, although they were derived quite differently.

The increased incidence of trichophytin allergy in our series after the second decade (in that age group in which is found the highest incidence of mycotic infections of the foot), coupled with the observation of the tendency of this disease to be accompanied by trichophytin allergy, seems to us to speak for the specificity of the reactions observed.

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7. Sutter, E.: Dermat. Ztschr. **24**:65, 1917.

SUMMARY

Of the one hundred and two persons who were tested for hypersensitivity to trichophytin, twelve were strongly positive in their reactions, twenty-three positive, thirty-two weakly positive, eight doubtful and twenty-seven negative. The reactions of the three 9 year old patients and of two of the four in the second decade were negative. The number of positive reactions increased rapidly from the twenty-first year.

Forty-five (74.5 per cent) of the sixty male patients and twenty-two (52 per cent) of the forty-two female patients who were tested gave positive reactions.

The feet of ninety-seven patients were examined clinically. Twenty-five showed no clinical evidence of fungus infection; fourteen presented a typical picture of interdigital mycosis (fissures and vesicular and scaling lesions with polycyclic borders), and fifty-eight showed merely some scaling and maceration between the toes. Forty-eight patients were examined microscopically for fungi, and in only nine could the fungi be demonstrated. Eight of the nine patients showed a positive trichophytin reaction.

In sixty-one cases the intradermal test, Pirquet's and the patch tests with trichophytin were done at the same time. There was no case in which we had a negative reaction to the intradermal test and a positive reaction to the Pirquet or to the Patch test. As a rule, it was only in persons with a strongly positive intradermal reaction that a positive reaction to the Pirquet or to the patch test was obtained. In this group, nine showed a positive reaction to the patch test and fourteen a positive reaction to the Pirquet test. In only one case were a positive reaction to the patch test and a negative reaction to the Pirquet test obtained. Twenty cases were followed from ten days to six weeks, in order to pick up delayed reactions; these were found in a relatively small number in periods varying from three to ten days after testing.

All patients were tested intradermally with Zürich trichophytin. For comparison, trichophytin Hoechst was injected intradermally into thirty-eight patients in full concentration and into twenty-one in a dilution of 1:50. The concentrated trichophytin of Hoechst caused a much stronger reaction than the Zürich product in twenty-two patients; it alone was positive in two, and the degree of reaction caused by the two trichophytins was the same in four. The diluted product gave the same degree of reaction as the Zürich trichophytin in all the twenty-one cases. It is fair to conclude from this experience that in this dilution it is a reliable indicator of trichophytin allergy.

The intradermal method of testing for the presence of trichophytin allergy in the average case is much more reliable than either the Pirquet test or the patch test.

THE REMARKABLE MEDICINE GUAIACUM AND THE CURE OF THE GALLIC DISEASE

BY ULRICH VON HUTTEN, GERMAN KNIGHT
TO PRINCE ALBERT, CARDINAL AND ARCHBISHOP
TRANSLATED BY
CLARENCE W. MENDELL, PH.D.
Dunham Professor of the Latin Language and Literature in Yale College
NEW HAVEN, CONN.

(Concluded from p. 704)

CHAPTER XX: WHETHER ANY ONE CAN BE RESTORED BY THIS DIET ALONE

About good practitioners there should be no evil opinion not even suspicion but surely these ordinary doctors are distraught to think that this cure can accomplish so much and that it can act alone and that it has power beyond its own activity; so they complain loudly that many are suddenly cured everywhere from whom they had expected for themselves a permanent revenue and had counted on a perpetual income: wherefore they contend most stubbornly to keep any one from destroying faith in the things that please them a thing which they fear may happen. Recently indeed they have made certain worthless statements which if they are made honestly must be laid down to error but if from jealousy to outrageous conduct. Namely that a patient may be restored by this diet alone in the treatment with guaiacum even though he does not drink the decoction of guaiacum or take any medicine at all: and I myself have seen men who promised that they would make a decoction from juniper sawdust or oak or ash or pine or of all together and that if they did this they had no doubt that they could effect cures of those same diseases with the same result. As far as this is concerned although I strongly suspect that they are making a malevolent attempt nevertheless I wish them the best of fortune corresponding to their hope; for what could occur more fortunate for this nation than to find that that grows in our own forests which otherwise has to be sought so far abroad and which is such a great remedy for us? But I am very much afraid that this rash promise is undertaken by them in vain both because I believe this disease to be too severe to be cured by starvation without any drug added especially when it has fixed its roots very deeply as it generally does: and also because if these trees I mentioned had any such power this virtue would not have been unknown for so long a time inasmuch as they are native amongst us. Nevertheless let them try: for what else is the duty of

doctors save to search daily for something and to learn it by experiment and to find out what cures each disease? But in the meantime I would warn all men that they believe what I have said above that there is great help in frugality especially in the Gallic disease as there is in all others: but not such help that it can cure infected blood poisoned by the disease unless drugs are added which have this virtue. Just as if any two men were waging war and one of them obtained the promise from me not to help his enemy I might reckon it as a favor to him that I did not harm him but I ought not to reckon it against him that I helped him; so abstinence from food and drink does not in itself take away disease but it does not give it nourishment as if one should say that he did not bind a captive when he might have done so not that he loosed him when he had not such power. I have said about gout and about disease of the joints that men were restored who had betaken themselves to a more frugal diet or had restrained themselves in the use of wine and love: but about this disease and the evils that follow it the same idea never came into my mind; for it is too deep-seated to be quickly torn out and it spreads its powers too widely to make it possible to gather them together with any little effort: and it so thoroughly occupies the whole body which it has attacked that it cannot be removed from any part separately unless it is driven from the whole with one united attack, as it were. Credence should be placed in my word when I have experienced in this matter so much to my own great suffering that if any one could escape this evil by sober and moderate living I would have already escaped it long ago since I reduced my body to the greatest degree of emaciation through three whole years while in the meantime I did not hold on to this disease but nevertheless did not eject it. Come now ye magnificent promisers, cook up your ash, prepare for us your juniper and pine and if you will apply also box and cornel or plane and you will win gratitude from all of us for a great benefit if through you be given here what otherwise must be sought so far afield: your deserts will be much greater than if the Fuggers succeeded in making this land produce pepper or in making cinnamon grow here. And though I myself should receive this from you most eagerly if you ever gave it, still until you do give it I shall not believe that you have any such power: I shall not even have hope when I have so often been bidden to gape expectantly in vain and to hope for those mountains of gold.

CHAPTER XXI: WHAT CONSIDERATION SHOULD BE GIVEN TO THE STOMACH IN THIS TREATMENT

Throughout the whole period of treatment the bowels move but slightly and that with difficulty and what is evacuated is hard, not

so much because little is eaten as because of the effect of the medicine which is drying and astringent. Although I hear that this is not equally true in all cases: for they say that some have loose bowels at the beginning of the treatment, some throughout; which has been a source of wonder to me since in my case for the whole forty days my bowels moved but once without compulsion. But the excrement such as it is with this diet can be retained for five or six days without danger. Then the guaiacum powder boiled down in water is drunk, a half ounce in the morning; if this has no effect at first, it is given again on the next day and on the third; if even so the bowels do not respond, then an injection must be given or suppositories prepared for this purpose administered; for the bowels must be moved by all means. If any one would effect this by eating or drinking cassia I should not believe them greatly in error provided it does not happen more than once: and on that morning they should not drink guaiacum. I do not advise relieving the stomach by vomiting, "For" say Pliny, "vomitings make bodies colder and are bad for the eyes and especially bad for the teeth." Furthermore there are many things which in this treatment contribute to settle the bowels: first the fact that the body has already been emptied by purging; second because little food is consumed. But although there be not this outlet for evacuation nevertheless something is gotten rid of either by sweat with which the guaiacum drives out nocuous or superfluous matter or through the urine which is more clear of food. And this is another great comfort that in the meantime no inflammation occurs, no colics torment nor is there any sour taste nor does nausea appear nor do vapors rising from the stomach readily go to the head as in other cases. And it is easy to see that the patient is purged by urinating nor need any external incentive for this be sought. About sweat I will say a few words.

CHAPTER XXII: ABOUT CAUSING SWEAT

Some think that sweat should be induced if it does not come of itself; therefore they encourage it by covering the patient with more abundant bedclothes for three or sometimes four hours. Although this is one of the most difficult of the things that we suffer, still I have noted that this causes weariness but not failure; those who were being treated with me, all stood this with difficulty and said that this was the one thing in the treatment that was hard. But if I may say what I think and not merely what I have been taught, I should almost dare advise that no one be forced to sweat, except so far as the cure itself requires one to keep in bed three or four hours and not to leave it and to be covered up though not overwhelmed with much bedding and not

lying entirely motionless: in a word no great suffering should be caused. And I think many things are done in this as in other treatments rashly and through the customary superstition of the doctors of our country that ought not to be done: for although this medicine induces sweat by itself, it cannot be forced. Proof of this may be seen in this fact that I found that sweat was no more quickly induced in me when I was covered with three or four skins than when I lay under one cover. But this I would have understood that I would have the patient sweat by all means and if this does not occur naturally it seems necessary to force it, but gently: for I approve of nothing violent and those men I declare should be avoided who are wont to heat the body by the fire or overheat the hot rooms: for they break down the body and exhaust the humors, the source of strength. But when I say "gently" this is to be understood in this way that I think the man who keeps under a single cover for some time even if he is not loaded down to the point of discomfort and indignation will sweat sufficiently when the guaiacum works within.

CHAPTER XXIII: HOW THIS MEDICINE WORKS AND WHETHER IT CURES MEN GRADUALLY OR SUDDENLY

But now I think it is time to tell how the effects of this medicine are experienced and when the patients begin to improve and whether its blessings are swift and rapid or delayed and slow. In this as in other matters I shall say what I have seen and know myself with this warning that no one blame me if with them it turn out differently from what I have written. I have learned that the advantage of guaiacum is experienced gradually, not suddenly; that it proceeds little by little, does not work with a rush: for it is so far from helping at once or when it frees of pain from easing it quickly that it even at the beginning and generally for fifteen days actively intensifies the disease and increases the torture and spreads the sores to such a degree that one seems to oneself during those days to be worse off than ever before, either because at that period the disease is being dug out from within and there is pain in the process, or because the change in the condition of the body which is then effected tortures the patient by breaking through with a sort of crash and percussion. For surely this medicine does draw out the roots of this disease, and it begins to do this in some cases not long after the start, in some after a certain delay; in no cases before the seventh day, in some as in mine after the twentieth; but the blame for the longer delay lies sometimes with the patients themselves because they indulge themselves a little in eating: in my case, as I have already said, the fault was in the decoction of the guaiacum

because since the doctors had made it more light than was proper, I experienced its power more slowly. I have heard doctors say that its action is prompt or slow because different bodies have different dispositions. For this is certain, as Stromer instructs me again and again, that for us who have less robust spirit and who are more intently occupied with literary pursuits, sicknesses, if they occur, are for the most part more violent and lasting. They think besides that in this matter as in others it makes a great deal of difference in what part of the body the sickness is located and the right side is more readily curable than the left "since" says Alexander "the materials of disease are held in check by the greater exercise and are rendered more susceptible to cure." They say that the extremities are cured with greater difficulty because being distant from the body they can receive nourishment only at the last. In this connection it is to be noted whether the disease is mounting or descending: Celsus says: "Whatever pain is descending is more curable;" And again: "Every pain that is mounting is less accessible to medicine." Furthermore the diseases that arise in the private parts although because of inflammation (to which these parts are particularly liable) they have the most acute and violent pain, nevertheless they recover at once and among the quickest. Although they can, in other diseases, be affected by all medicines, because of the recent introduction of the use of guaiacum, I do not know whether they are always so. This is to be observed by all that wherever they suffer and with whatever form of this disease they are beset they should prepare guaiacum well. When they have drunk the decoction of guaiacum for a long enough period to be assured that it has spread itself through the veins, little by little the pain subsides, sometimes returning even more violently and then receding: for when once it has begun to subside it does not last long even if it revives. But with those who have ulcers the flesh is eaten away to the greatest extent: and yet this is the indication of the beginning of the cure. In my case, as never before, the bone of the tibia was bared to the width of a human fingernail, causing me great terror but without any difficulty to the flesh in healing: for it grew together within a few days. And so I see that it is the nature of the cure to dry up the ulcers from within and to evince its power first under the flesh. Besides I have seen a few men in whom the ulcers had healed totally while they were still contained within. And therefore I have heard some say who had had much experience in these matters that the guaiacum ended its effect only when the patient returned to eating and resumed completely his former manner of life. I have already said that in my case the end of the cure was about the fortieth day. However we are to weigh all these

points, I know that its effect is delayed to the utmost length: for it is not the nature of this medicine to act abruptly but gradually to purify the blood in whose poisoning lies the whole power of the disease and to keep from the body and to draw off the poisonous humors which are the food of the disease itself, in some persons through the urine and perspiration, in others through the excrements of the stool. But in general when the disease is beginning to give way to health the effect is first to force sweat, next to purge the body by the passage of urine, through which it washes out astounding impurities. And then the hands and feet begin to grow cold in an astonishing fashion and to such an extent that they seem deserted of internal warmth. The doctors say that this happens because at that time this medicine draws the heat from the extremities into the intestines and that when they are warmed it spreads itself outside: for certainly those who have been cured by guaiacum have been found to have the warmest extremities. And in my case although for the six or seven preceding winters my legs and feet were so cold that they could not be warmed even with many coverings of clothes, they are now so warm that I keep off the cold for the most part with a single garment. Having covered these points we must at length turn to this consideration, what is the function of guaiacum and against what diseases is it a help.

CHAPTER XXIV: WHAT ITS POWER IS AND WHAT ITS EFFECTS AGAINST WHAT DISEASES

Its chief function and peculiar is to remove wholly and radically the Gallic disease, but more especially when it is of long standing and matured: for we have seen those who were for a long time suffering under it more quickly and more effectively cured than those who were afflicted as yet by a recent scurvy only: not that even in the case of these there was anything incurable but because the cure proceeds with more difficulty and the disease clings longer and is torn out with more suffering. And so it resolves and dissipates in miraculous fashion tumors and gatherings and indurations and fistulas and nodules which have persisted for many years: fluxes, whether it dries them up or turns them aside, it wholly removes; it brings ulcers to suppuration, with the most gratifying relief to the whole being, and whatever lurks hidden in the inmost parts, it digs it out. And so in some cases, as in mine, it lays bare the bones, in others it makes visible the sinews and bursts the veins, or it eats away to the greatest depths the parts affected by the disease, with such foul smell that that odor cannot be endured. Furthermore the doctors gather that it has a heating and drying effect and they say that it cures the defects of the blood and the liver, but all this with

such moderation that it relieves indifferently those who are sick from sources of heat or cold. Therefore it delays fluxes, either by its drying effect removing noxious humors or eradicating their original causes, and it restores the interrupted good state of the body. It loosens phlegm, it opens the obstructed passages of the urine, the result often of anointments, both in other cases and in this disease too, and it stimulates and impels the urine. On this ground they believe that it helps patients with gallstones and ejects the stones from the bladder. I have found that it most violently draws off so-called black bile; and so it makes the patient more cheerful and checks irascibility: for in general its effect against melancholia is great. In the meanwhile it removes catarrh; and it frees the head from fluxes and, as we may believe, by warming the brain it relieves the heaviness of the head. It is said also to improve wounds badly cured before, however inflicted, when the old scar is reopened. It corrects long-standing emaciation of the body; and so men who have experienced this cure are very stout for the future. It is used with marvelous success for foul odor of the mouth and corrects the bad breath which itself comes from the use of ointments. It helps the internal organs, especially the stomach which it entirely renews, and it makes the bowels as good as ever before. Its effect on emaciated and dwarfed limbs is excellent, for it increases them and fills them out, it expands contracted muscles and hardens and strengthens relaxed ones. It has been found that patients rendered stupid by this disease are roused and restored to their former sense and vigor and recover their motor ability. I have already said that its effect on the bowels varies: with some it tightens the bowels, with others its effect is extremely loosening; again in certain cases it is at first constipating and then relaxing and softening; and that for moving the bowels the wood itself is given, ground very fine in a half ounce of drink. I have said likewise that the dose is not in proportion to the strength, nor does the wood once used lose its power; I know not from hearsay but from my own experience that even on the fourth infusion its strength is not exhausted although I would not deny that the first is much stronger. Some believe with great confidence that guaiacum is efficacious against fistulas, cancer, and gangrene. It cures shortness of breath and asthma provided the defect is the result of this disease or the use of ointment. But since I have already recounted the evils that this disease brings with it, it is superfluous to repeat them here. It removes them all, destroys them, and extinguishes them, as I have said before, most readily if they are of long standing. It is given with equal benefit to victims of gout: I have myself seen two cured though their feet were most cruelly affected. But the doctors

disagree as to how this is accomplished and think that it helps only those who are sick from a cold cause, a matter which I leave to be discussed with them. This remedy is also useful against paralysis; it cures it if recent and drives it out although I write this on the information of reliable men who know about it, for I have not yet seen any one who was so relieved. Ricius also attended a leper and told me afterward that he was not to be sure wholly cured but that he was much improved and was now not too unclean and could be endured; so that to him it seems that this cure may entirely protect and check leprosy though perhaps not entirely cure it; but if it were repeated or if the cure were used often he thinks then that the greatest harm of the disease could be put off for a very long time, though he has the greatest hope that if the disease were attacked by this method while still young it might be wholly cleaned out and the patient restored. They are trying likewise since the effect of guaiacum is so drying, to apply it to dropsy, the result of which we are awaiting. It is known to be helpful in epilepsy if, as the doctors say, it is the cold type of the disease. I have seen men who were suffering internally from the bad effects of other illnesses, whose stomachs were diseased and upset, and others besides who could not digest their food, and those who wished to recover and build up their strength after long illnesses, have recourse to this medicine, not without the advice of physicians, even Ricius approving in certain cases, because he said he knew that it could be used by healthy subjects or those not very sick without harm; that he believed firmly that if there existed a good bodily constitution, guaiacum preserved it, protected it, and strengthened it. And this will be enough to say about the advantages of guaiacum, and if any one ask me about the causes of them, then I refer him to the expert doctors; for I myself make no such profession, nor have I so undertaken straightway to give the explanation of those things which I write but this I promised, that whatever I had found out about guaiacum, either in my own case or in that of others, and what I had either seen myself or heard from others, I would commit to writing with perfect fidelity, and I shall leave the opportunity to many who come after me, who will explain the affair in proportion to their dignity. And now, that no one may be in ignorance of what guaiacum accomplished in my case, I will tell in what parts of the body and how I was affected.

CHAPTER XXV: WHAT DISEASES THIS REMEDY TOOK FROM ME

By this one result alone it is proved that in no bodily misfortune however appalling ought we to despair: for by how many doctors had

I already been mourned over, I who by the sudden and as it were divinely intervening help of guaiacum recovered my health? I know a certain true friend, who when the disease was most bitterly harassing me, when because of the pain I could not rest at night nor take food by day, advised that I commit suicide inasmuch as no remedy was found and my body seemed to be passing away in corruption with great pain and no hope of change, saying "Now even against your will you should be saved from this misfortune." He had forgotten indeed that we were Christians and remembered better than he ought that we were friends. Everything in the case of those martyrs of old, who bravely bore tortures for Christ's sake, ought to be looked on with admiration: but if any one may fail and lose courage, surely he can who is under the torture of this disease. I deny that the father of Licinius Caecinna suffered anything of this sort when he killed himself with the juice of the poppy; nor were others who did the same thing in such intolerable ill health. For surely this pest by its very foulness alone, to say nothing of the tortures which are immeasurable beyond all others, can produce a loathing of life. To Speusippus the philosopher when of old he was racked to the point of desperation by paralysis, when he was carried into the presence of Diogenes and greeted him with the words "May it be well with you," they say Diogenes made answer "With you may it be ill, since you endure to live in your condition." What would he who was accustomed to philosophize so severely have said had he seen me since I was equally tortured with those possessed by paralysis and was so foul of appearance and odor that I was a burden to all men and to some an object of hatred? Nevertheless I lived, with some hope still although so often fooled by the magnificent promises of doctors. And that no man may think that I suffered in one part only or lightly, I will tell how I was afflicted. First, I was helpless in my right foot, the disease having clung there for eight years, and in the middle of my tibia where the slightest amount of flesh covers the shin there were inflamed ulcers with swelling of the flesh, putrescent, causing great pain, and of such a sort that when one healed another broke out: for they were numerous, scattered about nor could it be brought about by the skill of the doctors that they all be reduced to one. Above these was a tumor so hard that it was thought to be bone and in that a great piercing pain without cessation and without measure: there was also just above the right ankle a gathering, this too hard as bone, the oldest of the remains of the disease in its early stages: when the doctors tried to remove this for me with the knife, with fire, and with all sorts of caustics, they accomplished nothing; but it would now swell violently and with the greatest pain, now subside and be more

moderate; it pained less when my foot was placed near the fire and yet it could not stand being covered with many garments. From this there was violent suppuration which seemed clearly inexhaustible; and as often as I put weight on my foot it suffered from pain unbearably. Then, further up, my hip and knee had become stiff and the thigh at that point had been reduced to extreme emaciation, and the flesh so reduced that there seemed to be scarcely anything but skin to cover the bone. Besides, each joint was so dislocated that for a long time I could stand on them only with the greatest pain, and finally not at all, while one of my buttocks was entirely reduced to the vanishing point. My left shoulder was likewise in pain, so that I could no longer lift my arm, the end of the shoulder blade was weakened and callous and in the middle muscle there was a tumor the size of an egg while the rest of the arm way down to the hand was wasted away to an incredible thinness. And on my right side, just below the lowest rib was an ulcer without pain to be sure but pouring forth a foul pus and dripping with filthy diseased matter, like a fistula with a narrow opening on the surface and a large cavity within; above this was another abscess as if a bone had grown there from the rib. Finally from the top of the spine at the back a flux proceeded toward all of these quite obviously: where it began, at the lightest touch my head suffered as though my cranium had been pierced and I could not turn my face to the rear without turning the whole body with it. And this further symptom—and if the guaiacum cure had removed this alone I ought to publish abroad its very great power—in my sleep at noonday which I craved terribly and to which I was so devoted that I missed it for not a single day in almost six years, although the doctors insisted that this was almost the single cause of all my afflictions, nevertheless I could not break myself of the desire; but now it has so far departed that I believe I could not sleep in the daytime even if I tried. Beset with these evils, so many and so great, when all had despaired, but when nevertheless my good genius I suspect bade me still have some hope, behold I dared to keep alive until the help of guaiacum came. May God give all good men this purpose, never to cease from hope! As for me I have no regrets and, if this be granted me in other respects, I have great hope of living a long while safe and sound. And so about the disease and about what cure there is in guaiacum, I have written what came to my mind with absolutely good faith and according to my ability, and I would here make an end did I not think that those who shall read these words ought to be warned how the patient after this treatment ought to conduct himself in the matter of diet. This I will expound briefly.

CHAPTER XXVI: WHAT ONE SHOULD OBSERVE IN DIET AFTER THIS TREATMENT

In the preceding chapters I have given warning that for three whole months or at least two after this treatment and when the patient has already left the confinement of this cure, he ought to keep some watch on his diet as a result. Now I say that this very thing, since it comes up for special treatment in its own place, is so necessary that I would say that if any one's health has been restored to him, it will not last unless after his recovery he observe carefully many things and, as though he were still restrained within bounds, live for some while within a certain regimen, three months, they decree, for those who have become much emaciated during the illness and who are subject to many secretions and whose muscles and joints have been much affected or those who are not considered to be of such strong bodily constitution that a short time is sufficient for the recovery of their strength; those on the other hand who are more powerful and not so desperate or reduced, for these they believe that two months from the time they go out is enough. To take the safest view, I would advise those who follow me to hold to this prescribed regimen as long as possible and first of all to refrain longest from sexual intercourse: because those who have recovered by use of guaiacum have bodies that are tender and in all respects weak and as it were born anew against which intercourse makes its attack and when it has overcome that feeble and still immature recovery of strength it breaks down and destroys the power of all the members; and since the practice of passion endangers not some one of the members but the whole body in one collapse, what else must he be thought to be doing who indulges in intercourse when he is so exhausted than to invite his own death or conspire for the quick destruction of his strength or rather to cast his entire health into manifest destruction? And if it is not permitted even to all who are in good state of bodily health to have intercourse, how decidedly should those eschew it who ought, having lost their strength, to be intent on recovering their health? And if before his fourteenth year no boy is able to have intercourse because his strength is not yet complete for undertaking such a dangerous thing, how careful should one be who is thus reborn not to give himself rashly to be shattered before he recovers his strength. Next to this, since to those racked by continuous hunger there comes a most frightfully keen appetite, they should indulge it most moderately and as far as possible act most continently in regard to their diet. So at first they should take very little food, then gradually more but only

after a considerable interval should they return to their former habit of eating, accustoming themselves to it little by little and making no hasty innovation. Moreover they should drink no wine at all except what has been beforehand diluted with much water and what is of itself of light bouquet and clear, and then only with the utmost moderation. Let the patient protect himself against exposure to the air especially at such times as are beset with cold and wind and rain; or better let him go most rarely into the open air. Let him take food twice daily, more lightly in the evening and at that time let him never during the whole period indulge his appetite but shun satiety as the greatest evil; and let him avoid eating fish more than anything else, and of animal food let him eat chickens which are easier to digest and have more healthy juice as may be learned from the opinions of the doctors on this point. These directions are to be observed during those two or three months; for what should be observed in addition may be learned more clearly from what follows: for in brief I will give certain warnings that are worth following not so much by those who have recovered by the help of guaiacum as by those who are convalescent by any means from any disease or who for other reasons are especially careful of their health. In this connection it is most important to note, although all now know this, that this is the most annoying of the results of this disease, that it involves the most difficult diet, since after its defeat there is not one simple course of diet to be followed but a complex and varied one; so that the patient who has recovered ought to aim with wholehearted enthusiasm to seek or avoid those things which are useful or harmful in all of those diseases which I have noted as following on this one. Therefore with a diet carefully chosen throughout he should be on his guard that everything be done in order; although any who have been cured by this medicine may take great comfort in the fact that those who are expert in the matter think that after the health has been so recovered and after the proper time of observation following thereon, no one will be in any danger such as to bar him from his former manner of life, provided only that that was not wholly irregular: for he who has been so cured must take the same care as those who have never been attacked by the disease. Wherefore they do not think that so much attention is to be given to what one eats as to how much, nor is any kind of food to be avoided nor any choice in the quality of diet to be exercised, no care taken save what is known to pertain to the common conservation of health and the general avoidance of all diseases. The main point in this would perhaps be what Celsus says, that each should be on his guard "not to waste in good health the bulwarks against ill

health." But let health be preserved, as the same writer says, by diet, by medicine, by anointing, by massage, by baths, by exercise, by riding, and by reading aloud. How these are to be considered either most fully or as a whole, I leave to be sought in Celsus himself: here I will touch briefly on a few points. And so far as diet is concerned, I think one should eat with pleasure and moderately and those articles of food and drink should be taken which are most readily digested; for as Paulus says, "The fountain head of education is to have one's food easy of digestion, of good nourishing quality, by no means heavy or glutinous and not rich in superfluous matter; but for one's drink a light wine, white, pure, mixed with little water." And Celsus says, "Let food be without fats, without glutins or wind causing ingredients"; and according to the same man's advice all salted foods should be avoided in sicknesses of this sort, all things highly seasoned or acid, on the same reasoning I think that I have used in my advice in what has preceded. "The greatest crime" says Paulus, "in the matter of food is satiety: for although the stomach properly digests the food, nevertheless the veins when too replete suffer, are dilated, burst, are stopped up and filled with wind, and in general it is confessed that the worst diseases come from over eating." So thoroughly does he advise that one abstain from stuffing oneself. I think not only this but in addition that nothing ought to be over cooked or highly seasoned; and that care should be taken that not many or various dishes be served nor, as those rich men are wont to have, six, seven, or sometimes ten courses served at one dinner: for it is remarkable how harmful these are not only to the stomach but even to the whole digestive process. And so I must quote again from that same author wherein he says that "most diligently variety of food stuffs ought to be avoided, especially when they have opposite effects: for those which operate thus, resist digestion." And Galen too believes this and Avicennas and all those who have the keenest judgment in medicine. There is a precept of Cato quoted in Cicero to the effect that "enough food and drink should be taken to maintain strength but not to oppress it." Wherefore by the advice of Xenophon we should lunch as lightly as possible so that there may be opportunity forsooth for dinner. Obviously the disease is one of those which Galen holds come from overeating. This statement is to be understood in this fashion, not that I should believe that all those who pass their time in guzzling are immediately made subject to the Gallic disease, although all the most severe diseases do await such, but that if one has previously suffered from this ailment he will of necessity, if he eat and drink intemperately, fall back into it. Therefore let food be taken neither of great variety nor

of great quantity that the stomach be not thereby overburdened nor the digestion impeded; in the next place let it be as I have advised, that which is easy to digest: "Everything in the food line that is highly seasoned," says Pliny, "or eaten in too much quantity or too greedily is with difficulty digested, and less easily in summer than in winter and in old age than in youth." In Cicero we find: "He who lacks banquets and piled up tables and frequent goblets, lacks also drunkenness and indigestion and sleeplessness." But since after this treatment we must consider how the body, so thoroughly emptied and emaciated, can be restored to its proper conditions, we must give our attention indeed to those foods which build it up and supply it, foods not harmful to the humors of the body but such as Celsus notes in the third chapter of his first book. Pliny also says: "Bodies build up on sweet foods and fat and on plenty of drink; they are reduced by dry and arid and cold food and by thirst." But this advice must be followed cautiously for those reasons which I have cited repeatedly hitherto, since in fact in every respect Galen advised that the bowels must be watched, saying that "whatever is wrong there becomes the source of the infection of disease in the whole body." I think that those foods and drinks should be taken as Celsus teaches us "which at the same time nourish and also loosen the bowels." But if any one at the evil instigation of his nature fills himself repeatedly and loads his stomach with food beyond what it can endure, if indeed he seek relief from sleep, he ought to listen to Pliny speaking thus: "Digestion during sleep helps corpulence more than strength: wherefore athletes prefer to digest their food while walking." But if, as many urge and as Paulus most of all teaches, one wishes to relieve oneself by vomiting, inasmuch as there is often much harm in this process, one should read his instructions wherein he teaches how one may vomit with ease. But if both methods are neglected or attempted with more than proper delay, then perchance one must have recourse to medicine. About this, if the patient is driven to this extreme, I have no advice to give except that which I have often expressed before, that he put himself in the hands of a sane and learned doctor or one with good experience rather than abstruse learning, and one who only under compulsion prescribes drugs and then simple ones and if possible native. If he has advised that the bowels should be moved, then let the patient remember what Paulus says, that "this ought not to be done often lest because of the frequent irritation nature forget the work of spontaneous excretion." In the matter of foods to be sure and as to which are health giving and which harmful and how each works, if one has not said all, he has said nothing. Therefore I advise that the authorities be read, Celsus who

to be sure recounts the types concisely, Paulus, who on the other hand, deals extensively with the effects of foods in twenty-four consecutive chapters, or Galen who alone satisfies all, who in his books on foods omits nothing. And so I should have made an end of the diet matter if it had not occurred to me that certain remarks ought to be made in passing. In the first place about eggs, this will be my advice: "There is no other food," says Pliny, "which in sickness nourishes without burdening and has at the same time the function of wine and food," and Avicennas: "The yolk of hen's eggs or of partridge or phaesant eggs is superior to all food stuffs for those suffering from diminished blood supply or weakened heart action;" Alexander of Aphrodisium thinks that the egg comprises within itself the qualities of all elements, in short that there is in the egg a sort of image of the world both because it consists of four elements and because it is gathered into a spherical shape and possesses vital power. Several authorities condemn scrambled eggs and among them Paulus and Galen. The latter disapproves also the nourishment from vegetables. Many others also condemn cabbage although Marcus Cato lauds it to heaven. Galen thinks that the man who eats barley gruel to satiety every day need bother about no other foods for his nourishment. "And" he adds "I would say the same thing about beans if they did not produce wind." About milk used as food and as medicine Paulus speaks most eloquently. Alexander says: "Milk is easy to digest and gives excellent nourishment because it can pass easily into blood inasmuch as it is made of blood and is almost whitened blood." These few words chosen from many. "He who is interested in health" says Paulus "ought not to be ignorant of the power of wine." And again: "If wine intoxicates any one, he should drink cold water and on the next day take absynth juice, walk, be rubbed down, go to a bath, and finally refresh himself with just a little food." Galen says that wines that are just made should be avoided and those that are too old: for the latter are too warming, the former have no warming effect at all. "A thinning diet" says Paulus, "is much safer for the preservation of health than one which induces fat but it furnishes little nourishment, it gives no strength or power to the body." Wherefore he adds: "Foods of a medium substance are the best of all, inasmuch as they produce blood of a moderate substance; and just as foods of this sort are most suitable for our bodies, so those that produce a vicious fluid are especially dangerous and to be avoided." So much Paulus. And the same authority teaches that bread made of winter wheat is more nourishing than any other, that wheat bread is difficult to digest and produces wind. That barley bread has little nutriment. Whoever may wish to learn everything about

nourishment let him read this last authority as I have said and with him Galen. Of ointments there has never been any use among us and among the Italians although the practice once existed it has almost entirely died out. Massage Galen recommends beyond all else inculcating his doctrine abundantly and repeatedly on this point, especially in the books entitled "On the Preservation of Health." The same practice Asclepiades commends in the highest degree, Hippocrates strongly: his is the saying repeated by many afterward that by friction if it be violent the body is hardened, if it be slight, the body is softened, if constant the body is decreased, if moderate it is filled out. In our day that most learned man Erasmus of Rotterdam by daily use of massage especially in the morning when he gets up, thinks that he preserves the health of his body which is otherwise weak; and he advises me more strongly than on any other point to use this practice as he does all other very studious men: I follow the advice of my friend and I feel the benefit. Some authorities advise against washing and in general against baths and say that these are unhealthy for those who have recovered from this disease, I suppose because they soften the muscles and relax them, and they forbid us to pour water over ourselves though in other circumstances they do not deprecate sweating. "Water," says Alexander, "is bad for the muscles even hot water, not however because it is hot but because it is wet." In commendation of the hot bath Paulus speaks as follows: "It removes weariness, it relieves overfulness, it warms the body, it rests it and softens it, dispels wind, entices sleep and produces fat. It is in fact most beneficial to every man and woman, to youth and old age and to everyone." So Paulus. But in this day the Italians bathe only rarely which is a surprising thing to me since formerly they were accustomed to bathe daily, as literature bears witness and the remains of the baths at Rome built like cities. In exercises Galen teaches that moderation must be observed, saying "I condemn lack of moderation in every case." He also says: "Just as exercise before food is especially advantageous, so all activity after eating is most harmful: for the food is distributed from the stomach before it is digested and thence a multitude of undigested humors passes into the veins whence all kinds of diseases are wont to be born." "Exercise," advises Paulus, "is to be indulged in so long as the body tends to increase and to become ruddy and so long as the motions are strong, even and easy and the sweat seems to mingle with the vapor thrown off; but one should rest as soon as there is any change in these points." They advise also that rest should be given that member which has been recently restored to health: so rest, says Hippocrates, is a cure for the foot. Whence Alexander gathers that whatever member

has been cured a second time ought to rest. "For" he says "motion induces a concentration of superfluous matter which may excite inflammation." "Riding" says Celsus "is very bad for one whose knees suffer." He also thinks that "riding is bad for gouty persons too." The ancients used to exercise themselves vocally as well, either by singing or by reading rather loudly. I said that I would discuss these matters in passing and with no great pains but as each thing occurred to me most worthy of caution, with no regular order: let no one therefore expect anything here; if he wishes to learn, I have shown what things may be found in what authors. And behold another thing comes to my mind, how Galen says that one who wishes to guard the health of his body ought to take care of two points especially, one that his food be suitable, the other that he have ample bowel movement to clean out whatever superfluity of food is left over. Paulus says: "The ancients thought it was sufficient for the preservation of good health if every day the contents of the bowels and the urine were ejected amply and without restraint in proportion to the amount of food and drink." About sexual intercourse Galen omitted nothing from his advice, writing that it was injurious to all who are of a dry constitution, and especially to those who in addition are constitutionally cold-blooded: "For intercourse," he says, "is harmless only for those who are warm-blooded and of moist humor and who abound in semen." And again "Those whose bodily constitution is normal need not abstain wholly from intercourse like those who are cold-blooded and of dry humor." Likewise Paulus: "Intercourse injures all who are of a very dry humor especially if coolness of blood be also joined to this dryness: for warm-blooded persons and of moist humor however it is safe." "Like work," says Paulus, "intercourse is useful if moderation is observed." Everyone should remember this and for the sake of the muscles intercourse should be avoided with great care by those who have suffered from the Gallic disease. Boys Paulus thinks ought to be given exercise "in order that" he says "by labor both in body and in mind they may be restrained from the access of passion." Hippocrates compares intercourse with epilepsy. Alexander the Great used to say that "intercourse and sleep are the two greatest indications of mortality." Attention should be given also to good air, a great source of health: "Air" says Paulus "that is infected by evil vapors that belch forth a pestilential breeze or by nearness to some sewer, or foggy air or air held in a valley girt round on all sides by mountains, injures every age and every type of constitution alike, but the best air is advantageous to all:" "For a body," he says, "of moderate temperature, moderate climate is advantageous, for a body of extreme temperature, the extreme climate of opposite

kind." "Sickness" says Galen "is nothing else than activity outside the course of nature." The same authority says: "The doctors recognize as a healthy man one whose members all pursue the course of nature, as a sick man on the other hand one in whom any element departs from its natural functions." By the theory of the doctors warning is given against drinking immediately after excitement. Moreover they say that any sudden change is dangerous. This too is an established principle that unbroken rest is especially hostile to good health, that on the other hand moderate exercise is the greatest safeguard. Galen says: "Profound inactivity of the body is the greatest evil in the guarding of health, just as moderate activity is the greatest good." About sleep, when and to what extent it is to be enjoyed, Paulus has ample instructions and he shows what benefits follow it when properly approached. All authorities condemn noonday sleep. By those who are of a melancholy nature or who are torn with cares, the doctors think decisively that pleasure should be sought from some source, the mind exhilarated and the seriousness of nature relieved. "Thought should be driven away by pleasant sounds," says Paulus. "He who is healthy and independent" says Celsus, "should need no doctor or trainer." Although I agree with this and do not wish those who are in the best of health to bind themselves rigorously to any regimen of living, nevertheless I seriously warn those who have sometime suffered or who have bodies susceptible to the attacks of diseases or who follow such a kind of life that they cannot easily guard their health, that there is need of a certain regulation of life. Galen cautions us that a rule of life is by no means superfluous. "For diet" says he "is medicine."

These are the things, most worthy Father, most excellent Prince, which I have thought well to contribute to the subject proposed either having experience of them myself or having been instructed by others, especially by mute teachers themselves having made trial of them. And I have written them to your Highness not that I should wish you to use them yourself: our savior Christ grant that you never have need to: but that they might be published against the need of all in your court; of their worth you shall require the judgment of Stromer as I said in the beginning. Recently your other doctor Gregory Coppus, who has helped me in some points, has seen these writings, but only in passing, since I was hastening from him to Mainz where I had business. But if I had happened then to be at court (for you were away in Saxony) I should have treated everything more carefully and should have produced a more accurately finished work. As it is, however the thing has turned out, consider it a work of good will. In offering it, since I have intended it to be a Saturnalian gift at this new year's time, I wish

for you a happy and fortunate year, but one which, while satisfying to you, may be found to have fallen short of rousing envy. Farewell, most excellent, most worthy, most pious, most illustrious Prince, and may you be long preserved to us.

Completed at Mainz
End of the book of
Ulrich von Hutten, Knight,
On Guaiacum and the Gallic Disease.
Quod Felix Faustumque sit.

TOLERANCE FOR DEXTROSE IN ACNE VULGARIS *

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A survey of the literature of the past ten years would make it appear that the quantitative changes in blood sugar in various pathologic conditions had been thoroughly studied. In more recent years, the dermatoses have been included among these pathologic states. However, the objects of the present study were: (1) to try to throw additional light on the pathogenesis of acne vulgaris by means of tests of tolerance for dextrose; (2) to determine whether or not a concealed intolerance might not explain why pustulation is so common in this disease.

Simple acne vulgaris is undoubtedly closely related to the activity of the endocrine glands, as evidenced by the facts that it develops at or shortly after puberty; that it disappears when these disturbances of puberty have apparently become harmonized or balanced, and that in females it has a tendency to become more marked at menstrual periods.

Although glycogenolytic activities are more intimately connected with the liver and pancreas than with the endocrine glands, Wilson [1] found abnormal tolerance for dextrose in a small series of cases of hyperthyroidism. He even considered tolerance for dextrose an index in the early diagnosis of hyperthyroidism.

Assuming that an endocrine imbalance is present in acne vulgaris, the point was to determine the presence or absence of a lowered tolerance for sugar as one evidence of this imbalance.

The well known relationship of pyogenic infections of the skin to temporary or permanent hyperglycemic states needs no emphasis here. Suffice it to state that on clinical grounds there appears to be little question regarding the value of reducing or eliminating carbohydrates in the diet of patients with pustular infections of the skin, carbuncles, furuncles and pustular acne, in particular. With respect to furuncles, and exclusive of diabetes, the recent contribution of Pfahler [2] is highly suggestive. For a period of four years, the eminent roentgenologist had many boils. Within several hours following a rich Christmas dinner, four new boils developed. He then recalled that the original boil developed after a large breakfast of buckwheat cakes and maple syrup.

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* From the University of Pennsylvania Graduate School of Medicine and the clinic of Dr. J. Frank Schamberg.

1. Wilson, E. R.: J. Lab. & Clin. Med. **5**:730 (Aug.) 1920.

2. Pfahler, George E.: Prevention and Abortion of Boils and Carbuncles, Atlantic M. J. **28**:586 (June) 1925.

At another time a boil developed after he had eaten an excessive amount of candy. Therefore, to him the relationship between the rich carbohydrate intake and the furuncles seemed direct. Does it indicate that he possessed a lower tolerance for sugar than normal and that the abnormal load of carbohydrate produced a temporary hyperglycemia during which infection occurred? The mechanism is suggested by the studies of Usher and Rabinowitz,[3] who showed that a lower tolerance for sugar meant that after the ingestion of much dextrose, the sugar in the sweat increases from 100 to 150 per cent or more, and that there is, in addition, a marked increase in the sweat to perhaps from three to four times the normal output. Human sweat, particularly when enriched as a result of a low dextrose tolerance of the blood, is an excellent culture medium for bacteria.

As regards the pustular forms of acne vulgaris, the clinical evidence of a relationship between the intake of sugar and this disease is hardly less convincing. After what may even be termed a mild carbohydrate debauch, all dermatologists have seen pustular relapses in acneic patients, who were doing well under treatment. Does a temporary hyperglycemia occur in such patients, and are the bacteria in the comedones activated by an increase of sugar in the cutaneous secretions? The actual cause of the pustulation need not necessarily be due to *Staphylococcus aureus*. Indeed, Ketron and Brown[4] and others before them stated that *Staphylococcus aureus* is not always found in the lesions of acne, and when they are, they are usually present in small numbers. This may not be so true of the deep, indurated and pustular types, but for the purposes of the present study, it makes no difference whether the pustulation is due to *Staphylococcus aureus, albus* or *cutis-communis* as maintained by some or entirely to the acne bacillus as maintained by others.

A partial report of this study was made informally before the Section on Dermatology of the Pennsylvania State Medical Society in 1928[5] in the discussion of Wertheimer's paper on acne vulgaris.

REVIEW OF THE LITERATURE

With the exception of the studies of Levin and Kahn, sugar metabolism in acne vulgaris has been studied by numerous authors from the

3. Usher, B., and Rabinowitz, J. M.: Excretion of Sugar in Sweat, Arch. Dermat. & Syph. **16**:706 (Dec.) 1927.

4. Ketron, L., and Brown, J. H.: Acne Bacillus: Experimental Observation on Its Pathogenicity for Animals and Men, Arch. Dermat. & Syph. **20**:6 (Dec.) 1929.

5. Greenbaum, S. S.: Discussion on Treatment of Skin Diseases, Pennsylvania M. J. **32**:327, 1928.

quantitative but not from the tolerance angle. McGlasson [6] stated that acne vulgaris was a condition in which hyperglycemia was almost always a constant factor. Schwartz [7] and his collaborators and Levin and Kahn [8] found hyperglycemia in about 50 per cent of their patients. The studies of these authors were not confirmed by those of Fisher [9] nor by those of Strickler and Saylor.[10] Fisher found hyperglycemia in but three of seventy patients with acne; Strickler found it in but two of thirty-nine patients who had acne, and in only ten of eighty-five determinations. The last two mentioned authors explained their contradictory observations by suggesting that cyclic variations occur in the blood sugar. Such variations do occur and are explained on the basis of Forsgren's discovery of the rhythmic functioning of the liver. While primarily interested in metabolic disturbances in acne vulgaris, Levin and Kahn also studied the dextrose tolerance in twenty-three patients. They gave 100 Gm. of dextrose to fasting patients, irrespective of their weight. The blood was examined at two and at three to four hour intervals after the test on the basis that patients with intolerance show no decline in blood sugar for several hours or days after it has been increased by the test. They found the curve for dextrose in all cases normal. It will be seen that their methods of procedure and of reading the results differed in several important details from those to be described.

METHOD AND DEFINITION OF THE TEST FOR DEXTROSE TOLERANCE

The method pursued in the present study was to give each patient 1.8 Gm. of dextrose per kilogram of body weight dissolved in 2.5 cc. of water. The full dose was given on an empty stomach, and the blood was drawn at once and one-half, one, one and one-half and two hours after the subject received the dextrose. The specimens were examined within two hours after their removal from a vein at the elbow joint.[11]

The definition of the test for dextrose tolerance varies, but the results in this study have been judged by the fact that the blood sugar level in the fasting normal young adult should range between 80 and 120 mg. per hundred cubic centimeters of blood, and that after the

6. McGlasson, I. L.: Hyperglycemia as an Etiologic Factor in Certain Dermatoses, Arch. Dermat. & Syph. **8**:665 (Nov.) 1923.

7. Schwartz, H. J.: J. Cutan. Dis. **34**:159 (March) 1916.

8. Levin, D. L., and Kahn, M.: Am. J. M. Sc. **164**:379, 1922.

9. Fisher, J. E.: Blood Sugar Level in Some Common Skin Disorders, Arch. Dermat. & Syph. **18**:732 (Nov.) 1928.

10. Strickler, A., and Saylor, M. A.: Sugar Metabolism in Acne Vulgaris, Arch. Dermat. & Syph. **20**:705 (Nov.) 1929.

11. The estimations were determined in the chemical laboratories of the Graduate Hospital under the direction of Mr. Keller and in the routine course of all examinations (Folin and Wu's original method).

TABLE 1.—*Observations in Fifteen Patients Without Acne Vulgaris (Controls)*

Name	Condition	Age	Before Test	½ Hour	1 Hour	1½ Hours	2 Hours
R. S.	Secondary syphilis	25	96	154	115	111	118
F. R.	Psoriasis	31	98	115	163	177	154
M. N.	Infectious dermatitis	15	98	124	124	137	129
M. F.	Syphilis	54	98	152	137	133	129
R. G.	Dermatitis	25	93	166	173	168	143
L. M.	Lupus vulgaris	30	96	152	166	113	139
R. D.	Syphilis	34	82	150	157	145	87
S. F.	Psoriasis	16	104	71	100	82	104
B. K.	Psoriasis	12	100	93	91	100	71
E. D.	Syphilis	32	87	104	122	111	102
A. G.	Dermatitis	30	80	120	96	69	78
P. F.	Syphilis	19	109	118	100	120	113
P. S.	Herpes	25	98	118	111	102	85
H. G.	Syphilis	20	98	91	82	104	100
B. C.	Scabies	48	93	190	129	131	111

TABLE 2.—*Observations in Thirty-Nine Patients with Acne Vulgaris*

			Mg. per Hundred Cubic Centimeters of Blood				
Name	Type Acne	Age	Before Test	½ Hour	1 Hour	1½ Hours	2 Hours
F. D.	Mild	26	122	195	217	203	151
P. B.	Deep pustular	17	100	135	120	118	91
M. C.	Mild	18	111	131	234	200	135
I. H.	Mild	16	98	153	157	121	110
W. P.	Mild	19	109	102	166	191	150
G. F.	Moderately severe	18	96	109	148	154	143
R. A.	Moderately severe	20	89	157	203	178	157
N. L.	Mild	12	90	166	93	115	104
M. A.	Mild	16	102	197	207	220	193
S. T.	.....	18	74	157	150	118	100
M. L.	Mild	19	100	131	166	150	131
I. D.	Mild	20	96	150	183	166	131
S. T.	Mild	18	100	183	183	133	60
M. L.	Mild	22	104	122	141	138	113
C. K.	Deep pustular	15	87	166	96	96	91
M. L.	Marked pustular	16	104	150	134	115	129
H. C.	Moderately mild	16	85	150	142	111	100
J. F.	Mild	18	85	111	93	93	98
A. C.	Mild	23	82	190	200	115	82
P. R.	Pustular	17	101	124	102	100	104
H. G.	Pustular, chin	27	104	183	142	154	...
E. P.	Mild	23	80	133	142	157	150
E. K.	Mild	21	87	183	200	185	...
J. C.	Mild	16	99	104	207	234	227
W. C.	Moderately mild	18	98	150	142	100	146
D. L.	.....	16	100	142	176	166	150
B. S.	Moderately marked	18	91	143	111	100	118
A. B.	Moderately marked	..	131	145	145	118	85
D. S.	Moderately marked	19	87	96	143	139	143
I. M.	Mild	16	80	111	98	96	82
B. C.	Mild	18	87	118	118	122	87
G. S.	Moderately mild	20	87	135	150	141	130
A. C.	Mild	20	98	158	170	143	109
M. M.	Mild	12	76	131	104	118	109
E. R.	Moderately mild	18	96	109	82	78	78
R. R.	Mild	..	97	100	131	150	113
H. Z.	Mild	18	82	133	118	104	113
M. R.	Moderately mild	20	89	150	142	126	109
B. R.	Moderately mild	18	80	111	98	96	82

ingestion of dextrose it should not rise above 180 mg. during the first hour and should be at or below the fasting level at the end of the second hour.[12] The result was considered abnormal if the sugar level rose over 180 mg. or was not back to its original level at the end of two hours.

RESULTS AND CONCLUSIONS

In a control group of fifteen patients there were seven, or 47 per cent, with intolerance for dextrose as defined in this study (table 1). Of thirty-nine tolerance curves for dextrose made for as many patients with acne vulgaris, there were twenty-four, or 61 per cent, that indicated a varying degree of intolerance (table 2).

The difference in the two groups is so small that I should be unwilling to base any statement on it. In the first place, if intolerance for dextrose is present in acne, it is not present either in all types of acne or even in all pustular types. Second, if there is any connection between the intake of sugar and pustular acne or if intolerance for sugar is part of an endocrine imbalance generally believed to be present in acne, this test does not appear to be of help in detecting it.

The clinical observations apparently cannot be checked by the present laboratory procedure. However, the explanation of the clinical phenomena may lie in the endogenous periodicity of the content of blood sugar as recently emphasized by Möllerström.[13]

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12. Jonas, Leon: Essentials for the Diagnosis of Diabetes, Pennsylvania M. J. **33**:365, 1930.

13. Möllerström, J.: Daily Variations in Sugar Content of Blood, Svenska läk.-sällsk. handl. **56**:211, 1930.

TREATMENT FOR ERYSIPELOID BY LOCAL INJECTIONS OF SPECIFIC SERUM

REPORT OF A CASE *

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The presence of erysipeloid in the region of the Great Lakes and its successful treatment by the intragluteal injection of specific serum (Mulford) have recently been recorded.[1] The purpose of this report is to bring to attention another case of this infection and to record the results of treatment by the local injection of specific serum.

REPORT OF CASE

History.—A white man, aged 26, was first seen on July 16, 1930. Ten days previously, while working in a general biologic laboratory, he had been bitten on the left palm by a turtle. During the following two days he had handled many decomposing lake perch. Two days afterward he noticed redness, tenderness, swelling and pain about the site of the injury, accompanied by red streaks that extended up the left forearm and a tender gland in the left axilla. Hot packs had been applied to the hand and forearm, which resulted in the disappearance of the red streaks and some improvement in the original lesion. Subsequently a dull red, elevated, tender process developed about the injury and spread to involve about two thirds of the palm. The patient complained of pain on deep pressure. At this time treatment consisted of exposures to ultraviolet light and the local application of pure sulphonated bitumen.

The patient's past and family histories were unimportant.

Examination.—Physical examination revealed a young man of moderate stature, who was not acutely ill. No gross abnormalities were evident, aside from the condition of the left hand.

On the left palm just proximal to the fifth metacarpophalangeal joint, there was a small crusted lesion, about 1 cm. in diameter (fig.). Surrounding this lesion and involving about two thirds of the palm was a dusky erythematous plaque with a brightly erythematous, elevated border which was advancing toward the radial side of the palm. This border was tender on pressure. There was no desquamation either on the border or on the central part of the lesion. The process also extended along the dorsal surface of the fifth finger to the first interphalangeal joint. Small nontender glands were palpated in the epitrochlear and axillary regions on the left side. During the following four days, the process subsided in the aforementioned areas, but it had extended to the remainder of the

* Submitted for publication, Nov. 7, 1930.

* From the Division of Dermatology of the Department of Medicine of the University of Chicago.

1. Ritchie, E. B., and Becker, S. W.: Erysipeloid: Report of Case of Infection Acquired from Fish of Great Lakes, J. A. M. A. **95**:26 (July 5) 1930.

palm and a small area on the flexor surface of the wrist. There was also some involvement of all the fingers except the third.

On the date of the patient's first visit, a small piece of skin was deeply excised from the dorsum of the fifth finger. This material was taken from the active border of the lesion, cut in two and planted in brain hormone broth. The bacillus of swine erysipelas was isolated by Dr. J. V. Klauder.

Condition of the hand at the time of admission

Treatment and Course.—Four days after admission, injections of *Erysipelothrix suis* serum (Mulford) were started. From 0.25 to 0.5 cc. of serum was injected into each of thirteen areas in and about the advancing border. The patient experienced no great discomfort from this treatment. Shortly after the injections the hand started to swell, although not to an alarming extent. The swelling persisted for one week. The day following the injection no new areas of activity were evident in the areas into which the injections were made, but a new process had

arisen on the flexor surface of the wrist. Three injections were made into this new area, 0.25 cc. of serum being used in each injection. The next day injections were made into a new area of activity on the dorsum of the hand, two doses of 0.25 cc. each being used. At this time the patient presented a large urticarial plaque on the extensor surface of the left forearm. This plaque disappeared one day later.

One week after the original administration of the injections, the swelling had entirely subsided, and no trace of the infection was evident. The pain and tenderness had completely disappeared. At the end of two weeks, the hand was still normal, and at the end of six weeks there was no trace of a recurrence.

COMMENT

In the case previously reported from this clinic the specific serum was administered intragluteally, the dosage being 25 cc. The result was a cure at the end of five days, but the patient experienced a moderately severe reaction to the serum which consisted of nausea, vomiting and diarrhea. Later she had severe pains in the joints and was confined to bed for several weeks. In the case reported a total dose of not more than 8 cc. of the serum was injected locally into the lesion, which resulted in cure at the end of seven days, without a severe reaction to the serum. Four days after the first injections were started, a mild cutaneous reaction occurred in the form of a large urticarial plaque, which disappeared within twenty-four hours.

SUMMARY

1. Another case of erysipeloid infection is recorded; the infection arose from decomposing lake perch.

2. The bacillus of swine erysipelas was isolated from deeply excised tissue.

3. Treatment by local injection of *Erysipelothrix suis* serum (Mulford) was successful.

4. The injection of *Erysipelothrix suis* serum administered locally proved advantageous, not only because of the small amount (8 cc.) required, but because there were no accompanying constitutional reactions, such as are frequently encountered when the serum is administered intragluteally.

AN EPITHELIOMA SECONDARY TO PELLAGROUS DERMATITIS *

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In spite of the fact that it is not uncommon to observe both atrophic and hyperkeratotic lesions in the skin of pellagrins following the acute stages of the disease, the development of epitheliomas in such cases apparently occurs with surprising infrequency; because of this, and because of the extreme rapidity with which the epithelioma developed in the following case, it seems that the case is sufficiently unusual to merit reporting.

Examination of the literature covering the publications of the past fifteen years revealed only two analogous cases, both of which were reported by Lynch [1] in 1917. The first occurred in a colored woman, 22 years of age, who was brought to the hospital in the terminal stage of pellagra, and who died two days after admission. At autopsy, a section from the edge of a superficial, palm-sized ulcer on the inner aspect of the thigh disclosed an epitheliomatous hyperplasia of the marginal epidermis.

The second case was that of a white man, 75 years of age, who was first seen in the early stages of pellagra. He presented a symmetrical dermatitis of both hands, and suffered from diarrhea and epigastric pains. In addition to the acute dermatitis, there was an ulceration covering one half of the dorsum of the right hand. The margin of the ulceration was composed of an interrupted circle of firm, red nodules. The duration of this lesion was not stated. Eight months later, during which time the ulcer had been treated by a "cancer quack," a biopsy from one of these nodules showed the histologic picture of a squamous cell epithelioma. In neither case was the duration of the ulcer stated, nor was it clear that either ulceration was the direct result of pellagra.

In the light of the recent work of Weidman and White [2] on epithelial hyperplasias occurring at the margin of chronic ulcerations, the question

* Submitted for publication, Oct. 27, 1930.

1. Lynch, Kenneth M.: Epithelioma Developing in a Skin Ulcer in Pellagra. J. Cancer Research **2**:77 (Jan.) 1917; Epithelioma Developing in Pellagrous Dermatitis, ibid. **2**:131 (April) 1917.

2. White, Cleveland; and Weidmann, Fred D.: Pseudo-Epitheliomatous Hyperplasia at the Margin of Cutaneous Ulcers, J. A. M. A. **88**:1959 (June 18) 1927.

might be asked whether the previously reported cases represented true epitheliomas or whether they might not more properly fall into group 2 or 3 of Weidman and White's classification.

Following an acute pellagric dermatitis in our case, an epithelioma developed on skin apparently normal except for residual pigmentation, dryness and atrophy, and it occurred during the time that the patient was under close observation in the City Hospital.

REPORT OF A CASE

History.—L. P., a white man, aged 49, was admitted to the City Hospital on April 25, 1930, in a lethargic condition, with a symmetrical dermatitis of both hands and the face and with symptoms of marked weakness and diarrhea. He stated that he had been out of work for four and a half months, during which time he had drunk from half a pint to a pint of cheap whisky daily, and had eaten very little except coffee and doughnuts. Three months prior to entering the

Fig. 1.—Photograph of patient showing condition of the hands.

hospital, his hands had become red, dry and scaly, and he thought they had become chapped. Soon they became swollen, blisters appeared and they itched and burned severely. Two months later, marked diarrhea developed, and associated with the diarrhea were occasional attacks of nausea and vomiting. He became progressively weaker and lost much weight, and burning pains developed in the feet and legs. At night he had bad dreams and at times auditory hallucinations. Such was his condition on admission to the hospital.

Physical Examination.—Examination showed a fairly well developed, poorly nourished, middle-aged white man, who appeared lethargic and stuporous, and who answered questions slowly and with difficulty. The skin of the trunk was dry, pale and markedly dehydrated. There were erythematous, scaly, symmetrical areas of skin over both malar evidences and the sides of the neck. On the dorsa of the hands and the fingers down to the middle phalanges and extending up to a sharp line of demarcation about 4 inches (10 cm.) above the wrists, the skin varied from dark red to brown and was dry, scaly, cracked and fissured in places. At the time of admission, no hyperkeratoses or lesion suggestive of epithelioma was seen on the dorsa of the hands. There was no involvement of the palms or flexor surfaces of the wrists, and no areas of dermatitis or pigmentation were

seen on any other part of the body. The tongue was red and beefy, and there were several fissures on its dorsal surface. The buccal mucosa appeared normal. The teeth were dirty and carious, and there was an associated pyorrhea. There was no glandular enlargement. There was a generalized abdominal tenderness, but no viscera were palpably enlarged. All of the reflexes were present, but most of the deep reflexes were hyperactive. Laboratory observations were negative, except for a moderate, secondary anemia and marked hypo-acidity of the gastric

Fig. 2.—Photomicrograph of section through the base of the tumor at the time of its removal, showing friable, highly cellular and almost avascular tissue.

contents. The Wassermann reaction of the blood was negative. The patient's temperature was normal throughout the period of hospitalization. He remained at the hospital three months, but after a week his diarrhea subsided, and on a diet high in calories and supplementary feedings of yeast, the weakness and mental disturbance cleared up, and the condition of his skin steadily improved.

Six weeks before his discharge, there was first noticed a pea-sized, warty, flat papule on the skin over the knuckle of the right index finger. It grew rapidly

during the next six weeks, and at the time of his leaving the hospital it was a firm, roughly circular, hyperkeratotic lesion, 2 cm. in diameter and elevated 1 cm. above the surrounding skin. Its center was slightly depressed and covered with a dry, yellowish substance, resembling inspissated sebaceous material. The margins of this depression were overhung by dry, hyperkeratotic projections of skin. There was no tenderness or inflammatory reaction around the base of this growth, and no dilated capillaries were seen on its surface. A section taken through the base of the tumor at the time of its removal showed a friable, highly cellular and almost avascular tissue, which was submitted to the pathologist of the City Hospital for microscopic examination.

Pathologic Examination.—The pathologist reported that sagittal sections through the specimen showed a papillary growth of the surface epithelium. There were a few isolated masses and long, irregular epithelial papillae extending deep into the corium. In this region there was a moderate lymphocytic infiltration and scattered epithelial pearls. He considered that the presence of groups of the prickle type of epithelial cells deep in the corium, showing immature forms and irregular, nuclear patterns, was indicative of atypical mitosis and significant of malignancy. On the basis of these microscopic observations, he considered the growth a stratified, squamous cell carcinoma.

COMMENT

The causative factors responsible for the development of such neoplasms are not definitely known, but Lynch considered the precipitating causes to be similar to those leading to the malignant changes seen in skins exposed for years to the irritating effects of actinic or roentgen rays. He expressed the belief that the dilatation and increase in the number of capillaries in the skin result in an increased proliferation of the epithelium and a thickening of the epidermis, and that later the epithelium, in an effort to secure a firm basement membrane, dips deeply into the rarefied connecting tissues. He quoted Wolback,[3] who in his studies of roentgen ray dermatitis and cancer said that "the skin changes produced by roentgen rays cause the epithelium to penetrate to a field of better nutrition." Lynch expressed the belief that one is justified in considering that the direct precancerous factors in pellagrous and roentgen dermatitis are similar, and he stated that it has also been shown that in pellagra, a further penetration and an assumption of parasitism of the epithelium leading to the development of an epithelioma may occur.

Such theories may possibly explain to some degree the development of epitheliomas following such irritation as that produced by pellagrous dermatitis, but this case is presented principally because of the rarity with which such epitheliomas occur, and also because of the rapidity with which the tumor developed while the patient was under close observation.

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3. Wolback, S. Burt: The Pathologic Histology of Chronic X-Ray Dermatitis and Early X-Ray Carcinoma, J. M. Research **21**:415, 1909.

MORPHOLOGIC VARIATION WITHIN THE SAME SPECIES OF DERMATOPHYTE AS OBSERVED IN HANGING-DROP CULTURES*

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The identification of species of dermatophytes depends largely on the formation of special reproductive bodies known as "organes." The variability of these in hanging-drop cultures has long been a subject of concern. In our experiments, although four plantings were made and grown under apparently identical conditions, this variation still continued.

It was realized that whereas conditions seem identical in a quadruplicate set of hanging-drops, there was still enough variation in the drop to influence such capricious plants as these dermatophytes. The theoretical factors subject to variation, such as humidity, amount of oxygen, size of explant, etc., will be discussed later.

Considering only the species employed in this study (*Trichophyton interdigitale, Trichophyton purpureum* and *Microsporon audouini*), the following list includes all organes encountered. The terminology throughout this paper is that of Sabouraud.[1]

1. *Arthrospores.* Special hyaloid residual bodies in hyphae.

2. *Fuseaux.* Large multicellular fusiform spores.

3. *Chlamydospores.* Spores of the order of arthrospores, but larger, spherical and double contoured.

4. *Aleuries.* (Frequently confused with conidia.) Small spores with firm attachments to hyphae.

5. *Engrappes.* Aleuries clustered like bunches of grapes.

6. *Thyrses.* Composite arrangements, many aleuries closely arranged along both sides of a hypha.

7. *Spirals.* Delicate hyphae, either loosely or tightly coiled, like tendrils on a grape vine.

8. *Organes nodulaires.* Medium-sized, more or less moruloid spores made of involved, varicose, knotted hyphae.

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* From the Laboratory of Dermatological Research and the Laboratory of Hygiene, University of Pennsylvania.

* Dr. Fred D. Weidman of the Laboratory of Dermatological Research gave continued assistance during the course of this work.

1. Grigoraki, L.: Recherches cytologiques et taxinomiques sur les dermatophytes, Ann. d. sc. nat. **10**:165, 1925.

METHODS AND MATERIAL

The particular form of hanging-drop employed in mycologic work is somewhat different from the one used for bacteria for which, according to von Jaksch,[2] 1892, Koch was responsible. It was described by van Tieghem and le Monnier[3] as far back as 1873, and therefore may well have antedated the hanging-drop principle which was accredited to Koch. It consisted of slides with glass rings fastened to them instead of "depression slides." This was to provide a larger amount of oxygen for growth and more room for the bulkier colonies produced by fungi.

In this work four glass rings, 15 mm. in diameter, were fastened with petrolatum on a 2 by 3 inch slide. The drop of broth was placed on the under side of the cover glass, which in turn was fastened to the ring with petrolatum. Sabouraud employed a second slide in place of the cover glass. All glassware was sterile.

The dextrose broth was made according to Sabouraud's[4] formula, American crude dextrose being substituted (as in "Pennsylvania medium"[5]) for the original French maltose, which now cannot be obtained. Unless otherwise specified, explants were of the usual size, i. e., about 1 mm. square, and were taken from a point about half way between the center and periphery of the colony.

An attempt was made to find out whether more uniform results could be obtained under conditions differing from the conventional ones. Variations were therefore made in certain directions, as follows:

1. An excess of humidity was provided by placing the rings in petri dishes containing moist filter paper. The cover glasses were fastened to the rings with petrolatum in the usual manner, and a free circulation of air was assured by raising the rings off the bottom of the dishes.

2. The size of the explant was varied. The first hanging-drop was inoculated by merely touching the needle to the mother culture (bacteriologic technic). In the second, third and fourth preparations the particles of material cut out were increasingly large, the third being about the average, the second below the average, and the fourth above the average size usually employed.

3. The source of the explant was varied by taking material (1) from the center, (2) from the extreme edge and (3) from half way in toward the center of the colony.

4. The air supply was controlled by varying the size of the rings. On one slide standard rings 5 mm. high were used; on a second slide, rings 10 mm. high; and on a third slide, low rings 12 mm. in diameter and 2 mm. high. The "standard ring" preparations first mentioned, which were made according to the usual technic, served in all cases as controls.

While most of the plantings were made from cultures, native tissues were also cultured in hanging-drops; scales were used twice and hairs once. These were taken from the same patients as the cultures.

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2. von Jaksch, R.: Klinische Diagnostik, Leipzig, Urban & Schwarzenberg, 1892, p. 476.

3. van Tieghem, P., and le Monnier, G.: Recherches sur les mucorinées, Ann. d. sc. nat. **5**:263, 1873.

4. Sabouraud, R.: Les teignes, Paris, Masson et Cie, 1910, p. 585.

5. Weidman, F. D., and Spring, D.: Comparison of Ringworm Culture Ingredients, Arch. Dermat. & Syph. **18**:829 (Dec.) 1928.

To determine a possible rôle for bios, two sets of four hanging-drops each were made from cultures; in one set, fresh tomato juice passed through a Berkefeld filter was used, and in the other sterile human serum, in the proportion of 1 to 50 cc. of dextrose broth.

Strains Employed.—The three species used in these experiments were representative of the general group of the dermatophytes. Detailed descriptions of the gross cultures are unnecessary; however, each strain was chosen as a characteristic example of that particular species. In every case, it was a recently isolated strain that was chosen unless otherwise noted.

Trichophyton interdigitale Priestley,[6] 1917: Two strains were used. No. 1043 came from a long-standing case of ringworm of the toes; no. 1869 (powdery type) was isolated from a solitary vesicle on the sole.

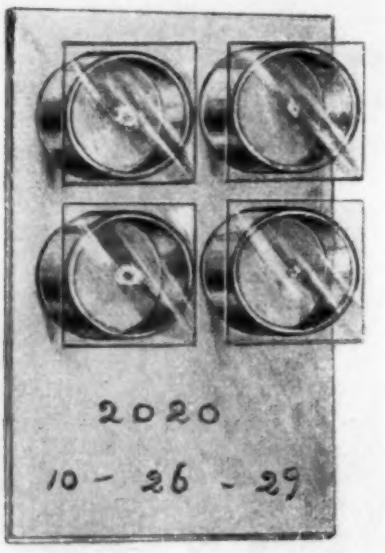

Fig. 1.—The van Tieghem cell, quadruplicate planting employed in the Laboratory of Dermatological Research to cover factor of variability to some extent. (From Weidman, F. D.: California & West. Med. **33**:465 [July] 1930.)

Trichophyton purpureum Bang,[7] 1910: This strain was isolated from a case of ringworm of the toes.

Microsporon audouini Gruby,[8] 1843: No. 1940 was isolated from ringworm of the scalp.

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6. Priestley, H.: Ringworm and Allied Parasitic Skin Diseases in Australia, M. J. Australia **2**:471 (Dec. 8) 1917.

7. Bang, H.: Sur une trichophytie causée par un dermatophyte nouveau, Ann. de dermat. et syph. **5**:225, 1910.

8. Gruby: Sur la nature, la siège et le développement du porrigo décalvans ou phyto-alopécie, Compt. rend. Acad. d. sc. **17**:301, 1843.

All these strains had been isolated during the summer, from one to three months before the fall of 1928. In February, 1929, new strains of nos. 1043 and 1550 were obtained from the same original sources. Conservation agar [9] cultures from 2 to 4 weeks old, were used for making inoculations. These were the primary cultures or those of the first or second generations. Powderiness, observed grossly, was considered sufficient indication of the presence of spores and the absence of pleomorphism.

Readings.—Readings were made at least four times and generally five or six times, at two, three, four, seven and ten weeks. Quantitative results were recorded according to the "4 +" method. As a matter of convenience, symbols were used to indicate the various organes present, a different color being employed at each reading to visualize the time factor. This graphic method made it much easier to grasp the time-quantity-quality relationships of the organes in the different sets of cultures.

ANALYSIS OF RESULTS

The results of these experiments are shown in the illustrations.

The number of observations, over a thousand, involved in the charts, appears adequate to justify the impressions on which the conclusions will be based.

Trichophyton interdigitale (no. 1869).—In each set of tests, all four colonies differed as to the production and numbers of the various organes. The "staphylochlamydospores" (chlamydospores that were arranged like staphylococci), developing from arthrospores, formed the most striking feature of this strain. Excess moisture produced abundance of growth, but did not bring out fuseaux. The old, standard technic of Sabouraud gave the best results.

Trichophyton interdigitale (no. 1043).—No very striking features were exhibited. There was the usual inconsistency, the "superhumid" series showing the most uniformity, also the greatest number of spirals and engrappes. Fuseaux were best brought out by the old technic.

Trichophyton interdigitale (no. 1043, new strain).—Humid conditions gave the best results. In some cases fuseaux developed near the center; in others they developed in clumps on long filaments extending far out from the starting point of growth, thus indicating mycelium specialized in the direction of fuseaux production. This fresh strain had the more chlamydospores, while the old one was better in respect to thyrses and fuseaux.

Trichophyton interdigitale (no. 1043, scales).—Hanging-drops, made from scales removed at the same time that material for the new cultures was taken, showed numerous organes nodulaires, but few of the other fruit bodies.

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9. Conservation agar of Sabouraud is used for carrying along stock cultures and to prevent pleomorphism. It is made according to his formula for dextrose agar already quoted, omitting the dextrose.

Fig. 2.—Trichophyton interdigitale in hanging-drop no. 1869. The graphic method was used in order to simplify readings of the organes within a species. It was easier to envisage conditions by means of symbols than by continually referring to the designations at the top of each column.

Fig. 3.—Trichophyton interdigitale in hanging-drop no. 1043 (old strain).

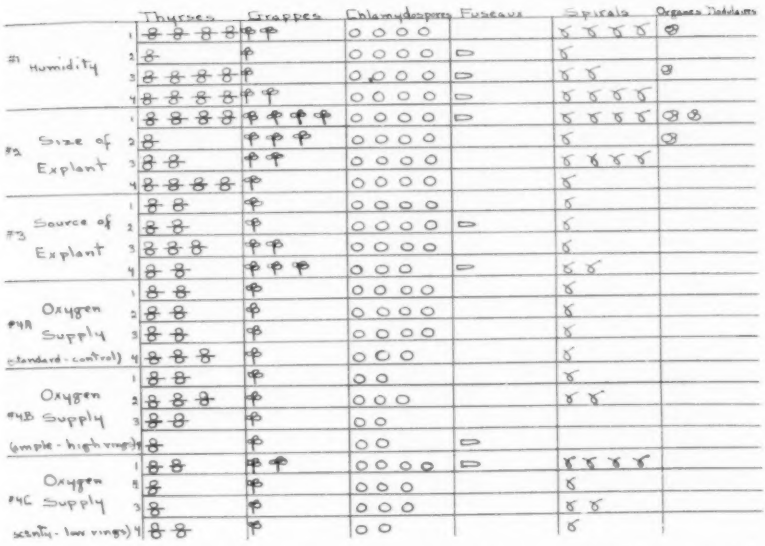

Fig. 4.—Trichophyton interdigitale in hanging-drop no. 1043 (new strain).

Fig. 5.—Trichophyton purpureum in hanging-drop no. 1550 (old strain).

Fig. 6.—Trichophyton purpureum in hanging-drop no. 1550 (new strain).

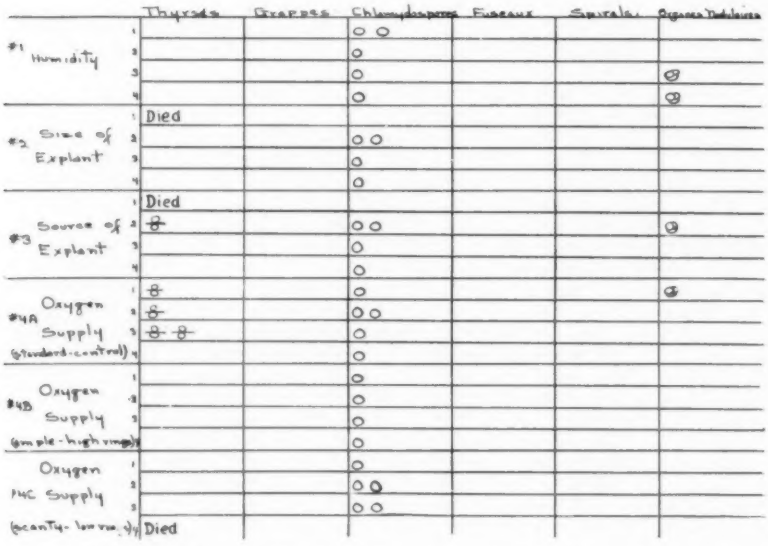

Fig. 7.—Microsporon audouini in hanging-drop no. 1940.

Fig. 8.—Hanging-drops containing bios-tomato juice.

Fig. 9.—Hanging-drops containing bios-serum.

Trichophyton purpureum (no. 1550).—This culture was slightly pleomorphic; it showed arthrospores in all preparations, numerous chlamydospores, and but few thyrses. "Superhumidity" served best because it brought out fuseaux, although they were abortive ones.

Trichophyton purpureum (no. 1550, new strain).—Here also humid conditions brought out the greatest variety of organes, although more fuseaux were produced with the old technic.

Microsporon audouini (no. 1940).—This strain showed only a moderate number of gigantic chlamydospores with a sprinkling of thyrses and arthrospores. The old method gave the greatest variety of organes.

Microsporon audouini (no. 1940, directly from hairs).—The same results were obtained as in hanging-drops made from cultures.

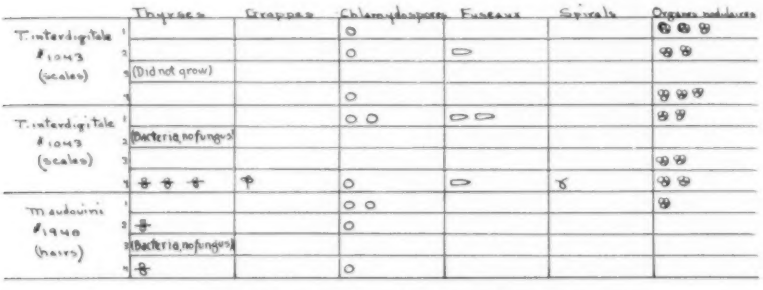

Fig. 10.—Native tissues in hanging-drops.

COMMENT

On the whole, the most typical and satisfactory preparations were obtained by using a modification of Sabouraud's [4] technic. Excessive humidity was more favorable for the foot than for the scalp strains.

Considering the great number of hanging-drops employed, but few especially striking phenomena appeared. Under these would come (1) "staphylochlamydospores," (2) large fuseaux and (3) the beaded mycelium made up of gigantic chlamydospores. Incidentally, the so-called asci of Wilenczyk [10] (large spores simulating chlamydospores but multiple, more or less fused and involved), are doubtless organes nodulaires; their development has been observed in some of the author's hanging-drops of *Trichophyton interdigitale, Trichophyton purpureum* and *Microsporon audouini.* While it is still possible that they represent abortive asci, as claimed by Wilenczyk, they do not advance as far as

10. Wilenczyk, A.: Trichophyton in Hanging Drop Culture, Compt. rend. Soc. de biol. **94**:201 (Jan. 29) 1926.

ascospore formation in our material; nor are ascospores indicated in Wilenczyk's illustrations. While the theory that organes nodulaires represent suppressed asci is soundly based and attractive, it has fallen short of proof.

There were inconsistencies as to the rôle of the age of the culture in producing a variety of organes. The old strain of no. 1043 was richer in thyrses and fuseaux, which are most important for determination, while the new strain produced more chlamydospores. On the other hand, *Trichophyton purpureum* was more typically expressed in the new strain.

Hanging-drops made from cultures of *Trichophyton interdigitale* were richer in organes than those made from scales. In the case of *Microsporon audouini,* the hanging-drops made from hairs were almost identical with the ones made from cultures.

In general, preparations containing bios developed a greater variety of organes, but in some cases smaller numbers of an individual kind of fruit body, especially chlamydospores, grappes and spirals. On the whole, there were more organes nodulaires and fuseaux, especially in the case of the new strain of no. 1550.

Of the two bios containing substances, serum was better than tomato juice for fuseaux, with two exceptions: Tomato juice brought out more fuseaux in the old strain of *Trichophyton purpureum* as well as in *Microsporon audouini.* The number of large fuseaux in the preparations of *Trichophyton purpureum* (new) with serum was phenomenal. This was the most striking finding in both sets of preparations. It is realized, however, that a larger series of tests might not confirm these results. The amount of bios necessary for the best results deserves quantitative study.

CONCLUSIONS

1. The outcome of this work does not justify radical changes in previously accepted hanging-drop technic. It appears advisable, however, to adhere to some minor details such as height of rings (5 mm.), uniformity in size of plantings (about 1 mm. in diameter) and selection of explant from the midzone of the fungus colony. Readings should be made up to at least four weeks.

2. It is still necessary to employ a considerable number of hanging-drops (four or more) before coming to conclusions as to the approximate range of organes developable by a strain.

3. In order to bring out the utmost in the way of organes, it appears desirable that excess humidity be supplied continuously for growing cultures isolated from ringworm of the feet (two preparations to be kept under moist, and two under standard conditions).

4. It does not appear that any particular factors have been found definitely responsible for any special "organe," or to promote the development of this or that "organe."

5. The foregoing considerations make it appear that differences in supply of moisture, air, size of explant and quality of the material selected are not sufficient to explain the inconsistencies observed in different hanging-drops made from one and the same species and kept under apparently identical conditions. Possibly heterothallism [11] is involved. The only way of confirming this is to resort to single cell cultures.

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11. Harshberger, J. W.: A Text-Book of Mycology and Plant Pathology, Philadelphia, P. Blakiston's Son & Company, 1917, p. 93.

A SOLITARY VASCULAR MYOMA OF THE SKIN*

REPORT OF A CASE*

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The rarity with which leiomyomas of the skin occur, especially when there are definite indications as to the origin of the neoplastic muscle fibers, makes this case worth reporting.

Leiomyomas of the skin were first described by Verneuil [1] in 1858 in a specimen obtained in the dissecting room. In that case the tumor was found to be composed of muscular fibers, resembling in part those of the heart and in part those of the cells of the smooth muscles.

The clinical picture, i. e., pain on pressure, paroxysmal pain and the color of the tumor mass, was first described by Besnier [2] in 1880, and it has been shown [3] that these symptoms were persistent in about 70 per cent of the cases reported.

According to the classification of Babes,[4] dermatomyomas may arise from the proliferation of the muscular walls of the blood vessels, hyperplasia of the arrectores pilorum, the deep muscular layer of the skin (myomes dartique of Besnier) or myomas that reach the skin secondarily or originate in misplaced embryonic remnants.

In attempting to determine the number of such tumors that develop from the muscularis of the blood vessels of the skin, it is interesting to note that of the forty-four cases reviewed by Ormsby,[3] excluding the one that will be reported, only seven cases were definitely of such origin. Rarer still are the single solitary leiomyomas of the skin. Only four cases of this type had been reported [3] up to 1925.

The first case of vascular origin was reported by Brigidi and Marcacci,[5] in 1881. The case occurred in a man, aged 54, who for two years had complained of a swelling on the back of the right hand that had appeared without any known cause. Three months after his first

* Submitted for publication, Nov. 10, 1930.

* From the Department of Pathology, Cook County Hospital.

1. Verneuil: Bull. Soc. anat., 1858; quoted by Crocker: Brit. J. Dermat. **9**: 1, 1897.

2. Besnier, E.: Ann. de dermat. et syph. **1**:25, 1880; **6**:322, 1885; quoted by Crocker (footnote 1).

3. Ormsby, O. S.: Leiomyoma Cutis, Arch. Dermat. & Syph. **11**:466 (April) 1925.

4. Babes, V., in Ziemssen: Handbook of Skin Diseases, New York, 1885, p. 607.

5. Brigidi and Marcacci: Arch. f. Dermat. u. Syph., 1882, vol. 3; quoted by Crocker (footnote 1); quoted by Ormsby (footnote 3).

visit to them, some nodules appeared. Eighteen months later the left hand showed similar swellings, and still later some were found on the left foot. The patient felt no pain, but when the skin became red there was a sensation of heat. The nodules varied in color from red to a dark venous red.

The microscopic picture showed no vessels in the tumor mass, but the surrounding tissue abounded in arterioles, the muscular coats of which appeared hypertrophied, the adventitia infiltrated with small lymphoid cells and the lumen considerably contracted. The veins were dilated; some of them were surrounded by a feeble lymphatic infiltration.

Hardaway [6] reported the second case of vascular origin in a man 36 years of age who complained of a drawing pain on the right side of the back. It occurred especially during any change of temperature and lasted for about five minutes. The pains occurred in paroxysms at intervals varying from two to four days to from two to three weeks. After a time, the patient noticed a few lesions appearing over the site of pain, which gradually increased in number and in paroxysms of pain. The mass of tumor nodules was reddish. The nodules varied in size up to that of a hazelnut. The skin over the tumor was freely movable and normal.

Microscopic studies revealed that the tumors were composed of interlacing bundles of smooth muscle fibers, which were apparently derived from the muscular coat of the vessels adjoining the growth.

Eighteen years later [7] the patient reappeared with recurrences near the site of removal.

Hess,[8] Lukasiewicz,[9] Wolters,[10] Moeberg [11] and Spillman and Mighon [12] also reported cases of vascular origin. Interesting clinical observations were made in the following cases: Hess' case, in which there was no pain and in which there were a few nerve fibers in the tumor mass; Lukasiewicz' case, in which the microscopic observations of the periphery of the tumor nodule showed an increase of the muscular tissue in the vessels and in the sweat glands with a continuity of these elements into the tumor tissue proper; Wolters' case, in which there was no pain and in which the tumor originated from a direct transition of the muscle fibers from the tunica media of the blood vessels, hair follicles and sweat glands, and in which there was a tendency of the tumors to limit themselves to areas about the joints.

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6. Hardaway, W. A.: Am. J. M. Sc. **91**:511 (April) 1886.
7. Hardaway, W. A.: J. Cutan. Dis. **22**:375, 1904.
8. Hess, K.: Virchows Arch. f. path. Anat. **120**:321, 1890.
9. Lukasiewicz, W.: Arch. f. Dermat. u. Syph. **24**:33, 1892.
10. Wolters: Arch. f. Dermat. u. Syph. **25**:413, 1893.
11. Moeberg: Nord. med. Ark., 1911, pt. 2, p. 65; quoted by Ormsby (footnote 3).
12. Spillman and Mighon: Ann. de dermat. et syph. **5**:193, 1924; quoted by Ormsby (footnote 3).

Single solitary nodes in cases of leiomyoma cutis were reported by Audry,[13] Herzog,[14] Pautier,[15] Hoag [16] and Spillman and Mighon.[12] The latter reported the presence of two solitary nodules on the left leg. All authors except Spillman and Mighon gave the arrectores pilorum as the origin of the neoplastic growth.

In the case to be reported there is the distinction that the derivation of the tumor was from the blood vessels and that the tumor was solitary.

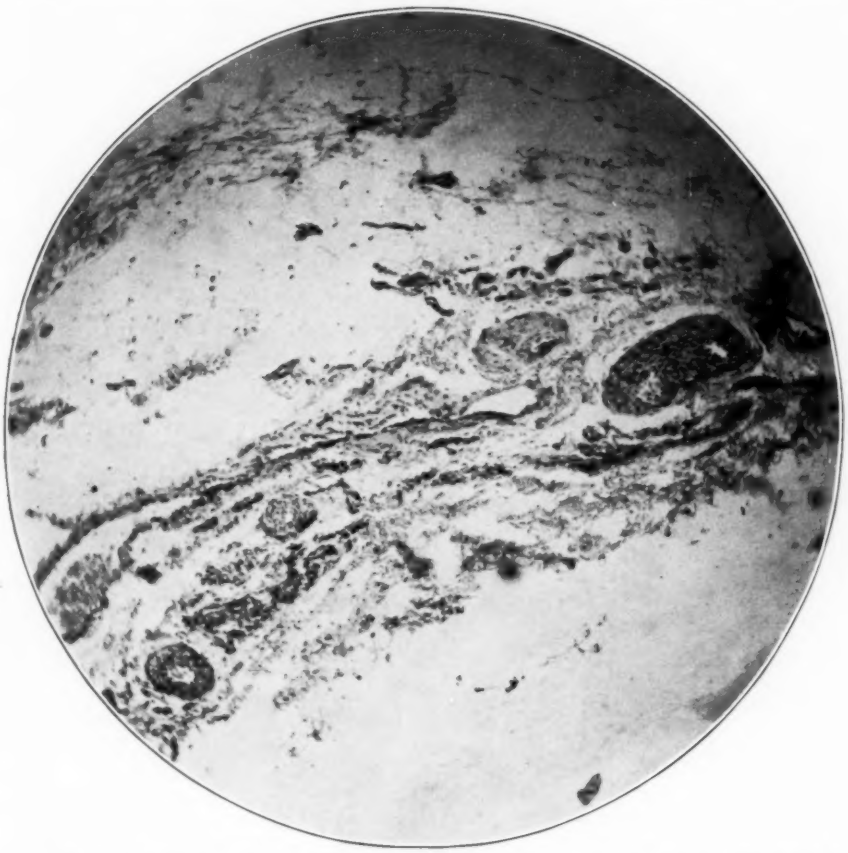

Fig. 1.—Photomicrograph, showing hypertrophy of the media in the blood vessels of the capsule surrounding the tumor. Hemalum and eosin stain; × 90.

REPORT OF CASE

History.—C. S., a man, aged 48, a cabinet maker, presented himself at the Cook County Hospital on May 27, 1930, to be treated surgically for a bilateral inguinal

13. Audry, C.: Bull. Soc. franç. de dermat. et syph. **9**:97, 1898.

14. Herzog, M.: J. Cutan. Dis. **16**:527, 1898.

15. Pautier: Bull. Soc. franç. de dermat. et syph., 1923, no. 3, p. 20; quoted by Ormsby (footnote 3).

16. Hoag, E. B.: Am. Med. **3**:736, 1902.

hernia. While convalescing, he thought it advisable to have removed a small solitary tumor growth which lay on the volar surface of the left hand, just below the wrist, between the extensor pollicis longus and the extensor tendon of the second finger. It was diagnosed by the junior intern as a ganglion and was removed under local anesthesia. A microscopic examination revealed that it was a leiomyoma.

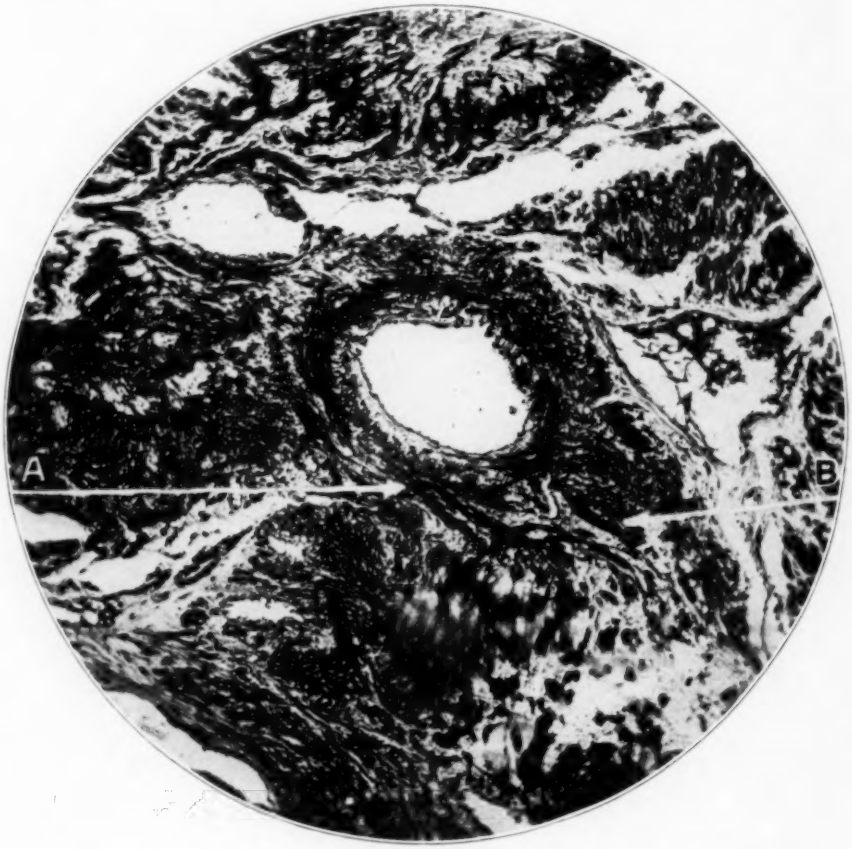

Fig. 2.—Section of the tumor, showing the muscle cells as they appear in being thrown off tangentially from the wall of the dilated vessel (*A*) and into the tumor proper (*B*). Mallory's phosphotungstic acid hematoxylin stain; × 90.

This led me to question the patient more closely, and we were able to obtain a history that gave a characteristic clinical picture of a leiomyoma cutis. The patient stated that he had first noticed this swelling sixteen years previously. At that time it was the size of a pea, and in the course of sixteen years it gradually grew to the size of a hazelnut. It had not, however, grown larger in the last four months. He had also noticed that the skin over the tumor mass was reddish, and that when he was angry, the tumor would become enlarged, the surface would take a purplish to a bluish hue, and an attack of pain would follow. At times the pain would be paroxysmal, especially when the patient was exposed to cold. The pain

was of a severe pinching character. The attack would last from a few minutes to twelve hours.

Gross and Microscopic Description.—The tumor consisted of a lobulated mass 14 by 16 mm. at its greatest diameter, and was situated deeply in the corium. The epidermis over the tumor mass was found to be freely movable. The mass was well encapsulated and was readily peeled out of its bed under local anesthesia.

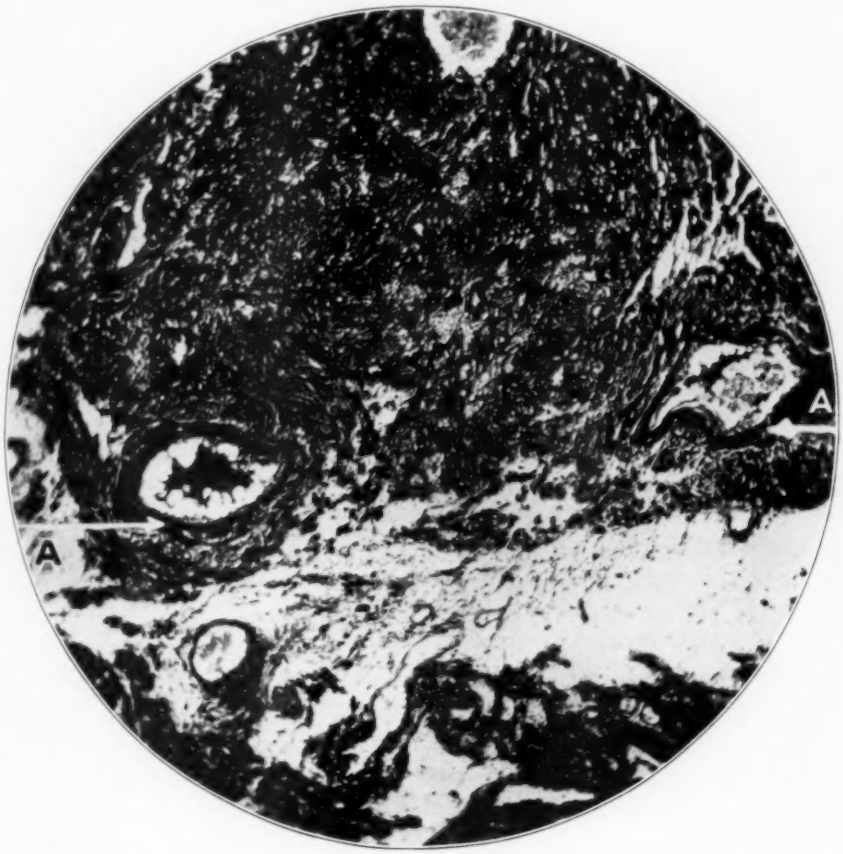

Fig. 3.—Photomicrograph, showing the replacement of the internal portion of the hypertrophied tunica muscularis of the blood vessels by rings of fibrillar connective tissue at *A*. Mallory's aniline blue stain; × 90.

A microscopic study was made of sections which were stained with hemalum and eosin, van Gieson's, Mallory's aniline blue, Mallory's phosphotungstic acid hematoxylin and Weigert's elastic tissue stains. The microscopic observations showed that the tumor mass was well encapsulated by a rather loose band of connective tissue. This capsule was well supplied with blood vessels that showed a definitely thickened layer of smooth muscle cells in the media, and the endothelium was cuboidal. No infiltrations of round cells were found about the blood vessels (fig. 1).

The tumor mass itself was composed of interlacing bundles of smooth muscle cells supported by strands and bundles of fibrillar connective tissue. Scattered throughout the tumor mass were innumerable, rather widely dilated veins the walls of which were thickened. In some areas the derivation of the smooth muscle of the tumor mass was evident. This was easily seen in the sections stained with Mallory's phosphotungstic acid hematoxylin stain (fig. 2). There the muscle cells appeared to be thrown off tangentially from the wall of the dilated vessel into the tumor mass proper. In some vessels rings of connective tissue replaced the internal portion of the hypertrophied tunica muscularis of the blood vessels (fig. 3).

Elastic tissue was practically absent in the tumor mass, except for a small amount found in and about the blood vessels.

COMMENT

According to the classification of Babes,[4] the tumor in the case reported would be considered a myoma of the skin derived from the blood vessels by the proliferation of its muscular elements (angiomyoma cutis). It further fitted Babes' description as being solitary and deeply placed in the skin.

From a clinical aspect the symptoms caused by this growth conformed with those in most of the cases reported; that is, the growth was elevated, painful and from reddish to purplish. However, in this case there was the peculiar deepening of color from a reddish to a purplish hue during an attack of pain. Such a change in color is similar to the action of the tumor described by Brigidi and Marcacci, but is contrary to the reports given by Arnozan and Vaillard,[17] Besnier [18] and Gutmann.[19] The former authors reported that the tumor at first was painless and colorless, but that when the skin over the nodule became red the patient experienced a sensation of heat. The latter authors reported cases in which the tumor lost its color during an attack of pain and regained it after the attack.

As to the pain in these growths: It may be completely absent as in Hess' case; it may amount to an extreme, agonizing viselike pain, as in the cases reported by von Marschalko [20] and Hardaway, or it may be an itchy sensation, as reported by Wolter, Jarisch,[21] Jadassohn [22] and Hardaway.

There is still some question as to the cause of the excruciating pain. Whether or not it is caused by nerve fibers that are occasionally found in the tumor mass (Hess [8] and Besnier [2]), by pressure of the tumor on

17. Arnozan and Vaillard: Ann. de dermat. et syph. **2**:60, 1881; quoted by Crocker (footnote 1).

18. Besnier, E.: Bull. Soc. d'anat et de physiol. de Bordeaux **1**:150, 1880-1881.

19. Gutmann, C.: Dermat. Ztschr. **13**:469, 1906.

20. von Marschalko, T.: Monatschr. f. prakt. Dermat. **31**:313, 1900.

21. Jarisch: Dermat. Ztschr. **2**:609, 1895; quoted by Crocker (footnote 1).

22. Jadassohn: Virchows Arch. f. path. Anat. **121**:88, 1890; quoted by Crocker (footnote 1).

the peripheral nerve fibers or by contraction of the smooth muscle element on the surrounding nerve tissue is not known.

Huldschinsky [23] expressed the opinion that pain is caused by a definite pressure of the tumor on the nerves within and around the tumor, whereas Gutmann expressed the belief that the contraction of the cells of the smooth muscles causes irritation of the inner portion of the tumor or of the stray nerve endings around the mass, resulting in severe pain. Von Marschalko considered it plausible that the pain was due to pressure on the ramifications of the nerves of the papilla, since he assumed the possibility of the abnormal stretching of the branches of the nerves by the enlarged growth.

An interesting microscopic feature in the case reported was the fibrotic process that occurred within the tumor. There was a fibrosis of the proliferating tunica media in a number of the blood vessels within the neoplastic growth. This process of fibrosis is similar to some of the processes that occur to some extent in the uterine fibromyoma.[24]

White [25] and Fritz [26] reported cases in which degeneration of the myomatous tissue took place. They described scattered areas in which the muscle cells showed shrunken nuclei and poorly staining cytoplasm with vacuolization.

SUMMARY

A case of a solitary vascular myoma of the skin is described in which there were clinical manifestations of pain—which were paroxysmal or which were produced by emotional changes, by changes in temperature or by pressure—and a peculiar red discoloration of the skin with free mobility over the tumor. The pathologic manifestations of interlacing bundles of smooth muscle fibers showed derivations from the muscularis of the veins; areas also exhibited replacement of the proliferating media of the blood vessels by fibrillar connective tissue.

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23. Huldschinsky, quoted by Gutmann (footnote 19).

24. Kaufmann, E.: Pathology for Students and Practitioners, Philadelphia, P. Blakiston's Son & Company, 1929, vol. 3, p. 1646.

25. White, C. J.: J. Cutan. Dis. **17**:266, 1899.

26. Fritz, W.: Arch. f. Dermat. u. Syph. **99**:45, 1909-1910.

THE ISOLATION OF RINGWORM FUNGI FROM SWEAT *

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Hyperhidrosis is a frequently mentioned etiologic factor in the production of dermatophytosis. In reviewing the literature, however, we found no report indicating the recovery of fungi from the sweat. In the course of our studies on the chemistry and physiology of sweat, we attempted to isolate fungus organisms from specimens of sweat.

In undertaking these experiments it was our belief that as sweat is apparently an excellent culture medium, it is therefore probably an active factor in the spreading of infections. This is especially true because sweat, containing as it does water, salt, sugar and nitrogenous compounds, has all the constituents of a good culture medium.

In a paper on human sweat as a culture medium for bacteria, Usher [1] showed that in the laboratory, fungi as well as bacteria would grow well when inoculated into sterilized sweat.

In 1908, Whitfield [2] reported a case in which the hands of a housewife and maid showed infection subsequent to their laundering the socks of the members of the family suffering from dermatophytosis of the toes. Thus the possible relationship of sweat to fungus infections of the skin was suggested.

In our experiments we recovered the sweat from the skin of patients and then inoculated it into a 4 per cent maltose-agar medium. As the feet are more frequently involved by dermatophytosis than any other part of the body, the sweat obtained from the feet and the lower third of the legs of eight patients was studied. For purposes of control, sweat from the face of one patient was also studied.

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* Submitted for publication, Oct. 20, 1930.

* From the Departments of Dermatology and Laboratories, Beth Israel Hospital.

1. Usher, B.: Bacterial Properties of Human Sweat, Arch. Dermat. & Syph. **20**:665 (Nov.) 1929.

2. Whitfield, A.: A Note on Some Unusual Cases of Trichophytic Infection, Lancet **2**:237 (July 25) 1908.

TECHNIC

The sweat was obtained by following the following procedure. The patient, wearing heavy rubber-dam stockings equipped with garters, was placed in a hot air cabinet. A lipped test tube was fastened to a hole in the dependent portion of each stocking. The patients used for our experiments were from the dispensary and hospital, and presented various dermatologic lesions. However, none of them complained of a condition of the skin of the feet, but examination of the skin revealed a slight scaling, mainly in and adjacent to the interdigital spaces of the toes. It may be of interest to note that the experiments were conducted during the late fall and early winter.

Each patient was bathed prior to the experiment, but no special attempt was made to prepare the feet. The stockings and test tubes were sterilized before each experiment. Sweating was induced by means of dry heat in the radiant-heat cabinet. The temperature registered between 130 and 140 F., and the necessary amount of sweat was readily collected in from fifteen to twenty minutes.

The sweat thus obtained was cloudy and grayish black and contained variable amounts of particles of dirt. By means of a sterile pipet, from 0.5 to 1 cc. of sweat was transferred in just sufficient quantity to cover the medium in an Erlenmeyer flask. The flasks were then kept at room temperature. In all eight cases in which the sweat was obtained from the lower extremities, fungus growths were observed within two weeks.

The growths were watched from day to day, and as variations were observed, specimens were fished out and transferred to fresh, sterile tubes and flasks containing the medium.

Invariably bacterial growths accompanied the fungus growths, but they were ignored.

The fungi were studied microscopically on slides and in hanging-drop preparations.

COMMENT AND DESCRIPTION OF ORGANISMS

The literature contains contradictory reports regarding the presence of pathogenic fungi on apparently normal feet. While some research workers were able to obtain a high percentage of positive results from the examination of material from normal feet, others reported failure.

Since it makes a good medium for fungi and when collected in the fashion previously described contains débris of the skin and the washings of follicles, sweat is more apt to contain the fungus and to result in positive cultures than are scrapings.

When sweat was spread on maltose mediums at room temperature, various growths of organisms were observed; these included the common types of bacteria, fungi and yeastlike organisms. By using sweat to inoculate, we succeeded in obtaining a fungus classified among the pathogenic organisms in five of eight cases studied. As a vehicle in spreading dermatophytosis perspiration is probably as important a single factor in the epidemiology of ringworm infection as any other factor.

Cornbleet [3] cultivated material obtained from normal feet of one hundred persons. In addition to numerous molds and yeasts, he recov-

3. Cornbleet, T.: Cultures from the Skin of Apparently Normal Feet, Arch. Dermat. & Syph. **13**:670 (May) 1926.

ered organisms of the *Epidermophyton inguinale* group from two cases and in one instance a culture of *Microsporon audouini*. Greenwood and Rockwood [4] examined for bacteria scales and bits of skin from the interdigital spaces of the toes of one hundred diabetic patients, regardless of any history of infections of the skin. As a result of their studies, they concluded that 75 per cent of diabetic patients showed pathogenic fungi on the feet. They also stated that all thickened and opaque toe-nails would show fungus infections.

Williams [5] stressed the importance of latent infection of the nails, and he detected organisms in the scrapings.

On the other hand, Burgess [6] found no pathogenic fungi after cultivating material from one hundred persons with normal feet. Keller [7] cultivated material from the feet of forty-two patients. In one case he was successful in isolating the Kaufmann-Wolf fungus. However, the patient's history revealed an infection of the toes during the previous summer. Keller obtained yeast growths in twenty-two cases. Bruhns and Alexander [8] were unable to find pathogenic fungi in normal feet of one hundred patients examined by them.

In five cases studied we obtained an organism which deserves special description because of the characteristics that place it in the group of previously described pathogenic fungi.

The organism grows rapidly and abundantly on a 4 per cent maltose-agar medium. It appears in a few days as a small, downy, white growth, resembling snow, about the size of a dime. It spreads rapidly peripherally, reaching its maximum dimensions in subcultures within from two to three weeks. The full-grown colony is at first downy; later it becomes velvety, and finally, powdery. Some colonies may assume a cerebriform configuration with rings concentrically arranged. While at first the culture is snowy white, after from two to four weeks it usually assumes a grayish-yellow tint. The tendency toward pleomorphism is marked and may occur in from four to five weeks.

In successive articles Weidman [9] stressed the importance of recognizing variations in cultural growths of fungi.

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4. Greenwood, A. M., and Rockwood, E. M.: The Skin in Diabetic Patients, Arch. Dermat. & Syph. **21**:96 (Jan.) 1930.

5. Williams, C. M.: Tinea of the Nails as a Source of Reinfection in Tinea of the Feet, Arch. Dermat. & Syph. **18**:730 (Nov.) 1928.

6. Burgess, J. F.: Fungus Infection of the Skin, Arch. Dermat. & Syph. **12**: 853 (Dec.) 1925.

7. Keller, P.: Zur Klinik der Hyphomykosen, Dermat. Ztschr. **49**:33, 1926.

8. Bruhns, C., and Alexander, A.: Allgemeine Mykologie, Handb. d. Haut- u. Geschlechtskr. **11**:249, 1928.

9. Weidman, F. W.: Morphologic Variations in a Ringworm Species of the Toes, Arch. Dermat. & Syph. **13**:374 (March) 1926; Light from the Botanic Field on Medical Mycologic Problems, ibid. **19**:867 (June) 1929.

Microscopic studies of hanging drop preparations showed abundant slender mycelia and numerous ectospores. The formation of chlamydospores is common in older colonies.

Muscatblit,[10] who cultivated organisms in many cases of dermatophytosis of the feet and toes at the New York University and Bellevue Hospital and Dispensary, has been finding in his cases an organism which appears similar to the one isolated by us from the sweat. We also isolated the same organism from frank cases of dermatophytosis of the feet. In 1918, Ormsby and Mitchell [11] isolated from cases of dermatophytosis of the feet fungi which had cultural characteristics similar to those isolated by us.

We believe that the organism recovered by us belongs to the group of Kaufmann-Wolf fungus, *Trichophyton* or *Epidermophyton inter-*

Fig. 1.—Cultures of organism recovered from the sweat. Note the tendency toward pleomorphic degeneration in the tube on the right.

digitale Priestley, or *Trichophyton gypseum* Hodges. The tendency of this organism to vary in its morphologic characteristics is great, and has been noted by others. Bruhns and Alexander [12] stated that the cultural characteristics of the Kaufmann-Wolf fungus may vary considerably. Besides the downy form, one can notice a yellow gypseum variety and a grayish-white or yellowish cerebriform culture; occasionally a reddish colony may also occur. More recently, in a case reported by Bruhns

10. Muscatblit, E.: Personal communications.

11. Ormsby, O. S., and Mitchell, J. H.: Ringworm of the Hands and Feet, J. A. M. A. **67**:711 (Sept. 2) 1916.

12. Bruhns and Alexander (footnote 8, p. 212).

and Alexander,[13] organisms were isolated from the lesions on the feet of an 8 year old girl. The growth on the culture medium first showed a grayish-brown colony radiating peripherally, but after several transplantations, typical fungi of the Kaufmann-Wolf type were obtained.

We believe that one may regard the Kaufmann-Wolf fungus, *Epidermophyton interdigitale* Priestley, Ota's variety 2 and 3 and also Hodges' *Trichophyton gypseum* and Takahastis' *Trichophyton interdigitale* variety 2 as one species.

Fig. 2.—Photomicrograph of hanging-drop preparation of the organism recovered from the sweat.

SUMMARY AND CONCLUSIONS

1. In order to prove a relationship between hyperhidrosis and fungus infections of the feet, maltose-agar mediums were inoculated with sweat obtained from the feet of eight patients.

2. Cultures of apparently pathogenic fungi were obtained in five of eight cases.

13. Bruhns, C., and Alexander, A.: Mykologische Beiträge: II. Atypische Form des Kaufmann-Wolfschen Pilzes (Epidemophyton interdigitale), Dermat. Wchnschr. **91**:1250 (Aug.) 1930.

3. The fungi obtained are regarded as belonging to the Kaufmann-Wolf group.

4. Bacteria, *Aspergillus niger,* and yeastlike organisms were also found.

5. As a result of our observations, we expect that further similar studies will prove that fungi occur in the skin of the feet of the majority of persons.

6. We believe that the sweat of the feet is a very common, if not the most common, source of transmission of epidermophytosis.

2 East Fifty-Fourth Street.

Correspondence

DATA ON HEREDITY IN DISEASES OF THE SKIN

To the Editor:—At the annual meeting of the American Dermatological Association in July, 1929, it was resolved to attempt the collection of data bearing on heredity of anomalies and diseases of the skin, and a committee was appointed for this purpose.

The skin obviously lends itself particularly well to studies in heredity because the manifestations are external, and are, as a rule, well known to the members of a family. Careful reports made in accordance with the current requirements of the science may yield results of great importance in the analysis of heredity.

The subject of heredity is involved in a great deal of popular misconception. It is of no value in the study of heredity to report that the patient says his father had a similar disease or anomaly. Such a statement may or may not be true. The reporter must satisfy himself by personal inspection of the ancestor, when that is possible, or by reliable collateral evidence that the statement is correct. Moreover, it is not sufficient to make a report concerning only the two or more persons affected and their relationship. The report should state the number of brothers and sisters of the affected persons, the year of birth of each, and evidence of stillbirths or miscarriages, with their order in the fraternity, the number of normal and of affected children of each of these brothers and sisters and of the subject of the report, and so on as far down as the line can be traced. The report should state whether one or both of the parents of the subject was affected, and should include, as far as possible, all members of the family of the parent through whom the condition is inherited, whether normal or otherwise. The sex of each person should be stated. The age of brother and sister at death should be stated, as many hereditary diseases do not appear in youth. Careful inquiry should be made as to the presence of the trait in relatives even of the unaffected parent.

All this requires considerable effort on the part of the reporter, but a few cases well reported are obviously of far greater value than a large number of inadequate reports giving such vague data as currently make up the body of popular notions on the subject. On the other hand, no one should be discouraged from reporting cases that to him seem valuable; the committee will always be ready to assist in every way possible in endeavoring to make the case reported scientifically available. Obviously, full credit will be given to the reporter.

As to the form of the report, in expressing relationships, a diagram is much more graphic and much easier to understand than a long description, and the use of certain conventional symbols simplifies the construction of a diagram.

The question as to which diseases and deformities should be reported must be left to the judgment of the reporter. Any anomaly that appears to occur in more than one member of a family should be made the subject of an inquiry. In any report, the disease record of the entire family should be given, as far as possible, for diverse syndromes may rest on a common etiologic factor. For example, allergy may show itself as hay-fever in one member of the family, asthma in another and eczema or urticaria in still another. Similarly, a tendency to dysthyroidism may appear as hyperthyroidism in one member and as cretinism in another.

The following diseases may be mentioned as among those which give suggestive or definite evidence of an hereditary element: albinism, total or partial;

alopecia prematura; cancer, all kinds; Darier's disease; dermatitis herpetiformis; dystrophies of the nails; epidermolysis bullosa; erythroderma ichthyosiforme; hydroa vacciniforme (aestivale); ichthyosis vulgaris; keratosis palmoplantaris diffusa; nevus, pigment, hairy, etc.; psoriasis; Recklinghausen's disease; telangiectasis of the cheeks; xanthomatosis, and xeroderma pigmentosum.

The committee has been fortunate in securing the cooperation of Dr. Charles B. Davenport, director of the Eugenics Record Office of the Carnegie Institution, and it is proposed to submit to him all records received. It is suggested that a brief preliminary report of any promising case be sent to one of the undersigned. Detailed instructions will then be sent to the end that the data submitted may be presented in a way that will yield scientifically useful records, and diagram blanks will be forwarded if they are wanted. It is earnestly hoped that every dermatologist in America will cooperate in this work.

S. POLLITZER, M.D., and CHARLES M. WILLIAMS, M.D.
Committee on Heredity, American Dermatological Association, Inc.,
200 West 59th Street, New York.

News and Comment

CLINIC AT COLLEGE OF PHYSICIANS, PHILADELPHIA

The Section on Dermatology and Syphilology will hold a clinic on June 9 at 2 p. m., Eastern Daylight Saving Time, at the College of Physicians, Twenty-Second Street between Market and Chestnut Streets, Philadelphia.

Abstracts from Current Literature

EDITED BY HERBERT RATTNER

NEW TECHNIC AND INSTRUMENT FOR OBTAINING BIOPSY SPECIMENS. W. J. HOFFMAN, Am. J. Cancer **15**:212 (Jan.) 1931.

The instrument consists of a steel sheath 14 cm. long and 2 mm. in outside diameter and electrically insulated on the outside except at one end, which is sharply honed. The other end has a tapered collar adaptable to any standard syringe. The sheath of the instrument is hollow and fitted for a sharp pointed steel obturator with a plug tip for connection with a source of high frequency current. Other members to fit the sheath are a conical tipped cutting "bucket," a trochar and a spiral cutter. By means of this instrument, fluid and small pieces of any type of tissue may be removed from a deep tumor without contamination of the small needle-like puncture wound, and the track of the needle may be coagulated with a high frequency current. (This instrument is being used at the Memorial Hospital, New York.)

SPECIAL CLINIC ON EPITHELIOMA OF THE LIP. MEMORIAL HOSPITAL, NEW YORK CITY, Am. J. Cancer **15**:229 (Jan.) 1931.

This article presents various types of epithelioma of the lip in which the treatment, essentially radium and roentgen therapy, has been adapted to clinical and anatomic variations. Twenty-one cases are presented. The introduction and summary are by Douglas Quick, the differential diagnosis by P. A. Nelson, the treatment of uncomplicated lesions by C. D. Haagensen, the treatment by irradiation of the lip and the implantation of radon seeds in the nodes by S. C. Johnson, the treatment of bulky lesions by irradiation by J. J. Duffy and the treatment by irradiation, wide excision and plastic closure by H. E. Martin.

Six cases are presented for differential diagnosis and include leukoplakia, capillary angioma, chronic nonmalignant inflammation, carcinoma with metastasis and tertiary syphilis. One of these cases, an extensive ulcerating gumma, was not correctly diagnosed at the Memorial Hospital until failure of intensive treatment with radium, with x-rays and also with zinc chloride paste prompted Wassermann and biopsy investigation. The cases were selected to point out the importance of histologic and serologic examinations as routine procedures, in addition to a knowledge of clinical differentiation of lesions of the lip, in the management of cancer.

Carcinomas of the lip not involving the gingiva-cheilial fold and without evidences of metastatic glands were treated with filtered radon applied to the lesions in molds of dental compound and with filtered x-rays directed to the sides of the neck. The lesions and adjacent tissues were cross-fired in the treatment, and the radon tubes used were a gold and platinum alloy or silver of 0.5 mm. thickness. The approximate dosages employed were 80 millicurie hours per square centimeter. Short wavelength roentgen rays, filtered through 0.5 mm. of copper, were employed in erythema dosage to fields measuring 8 by 8 cm. on each side of the jaws and neck. Four illustrative cases are presented.

Bulky lesions were treated by a combination of surface applications of radon tubes in dental compound and implantations of gold radon seeds, and metastatic nodes were treated by roentgen irradiation in erythema dosage, employing 0.5 mm. of copper filtration, and surface applications of radon packs. In some cases these procedures were followed by dissection of the involved nodes preceded or followed by the implantation of radon seeds. The implanted seeds were filtered through 0.3 mm. of gold and the surface applications through 0.5 mm. of silver. At times emanation packs to the neck were placed at a distance of 6 cm. with 2 mm. of brass filter for doses approximating 9,000 millicurie hours. To illustrate the large

dosage employed a case may be cited in which external irradiation approximated 115 per cent of a skin erythema dose and interstitial irradiation brought the total tissue dosage within the tumor-bearing area up to 930 per cent of an erythema dose. A severe local reaction of four weeks' duration occurred, followed by complete regression of the lesion without necrosis of normal tissue. There was no evidence of recurrence one year later.

Bulky, fungating carcinomas, deeply infiltrating and usually necrotic and infected, were exposed to heavy irradiation, and then completely and widely excised. Usually the entire lower lip was removed to the tip of the chin and a new lip formed by plastic flaps. The tissue on both sides of the lesion was usually exposed to radon packs and the areas of the neck irradiated with x-rays prior to operation.

Quick states that the greater number of patients with epitheliomas of the lip are treated most satisfactorily by surface applications, using the cross-fire method, and that in these cases it is the exception rather than the rule to find palpable metastatic nodes. In such cases roentgen irradiation should be applied to both sides of the neck as a precautionary measure, and all of the cases should be subject to careful and prolonged "follow-up" examinations as a routine.

H. R. FOERSTER, Milwaukee.

THE CORRELATION OF THE ROENTGENOGRAPHIC AND PATHOLOGIC ASPECTS OF CONGENITAL OSSEOUS SYPHILIS. STAFFORD MCLEAN, Am. J. Dis. Child. **41**:363 (Feb.) 1931.

The author, in a profusely illustrated article based on the examination of more than 1,500 roentgenograms of syphilitic infants, correlates the roentgenographic observations with the pathologic picture. Osteochondritis in its early and advanced stages, "epiphyseal separation," osteomyelitis and periostitis are discussed. Prints from typical roentgenograms are shown, and a histopathologic explanation of the various observations is given by means of photomicrographs.

ANDERSON, Los Angeles.

CONDYLOMATA AT THE INNER CANTHI. E. B. GRESSER, Am. J. Ophth. **13**:886 (Oct.) 1930.

This case is reported for record. It contained no special features for abstracting.

PIGMENTARY DEGENERATION OF THE RETINA IN CEREBROSPINAL SYPHILIS. J. S. FRIEDENWALD, Am. J. Ophth. **13**:943 (Nov.) 1930.

Retinitis pigmentosa is a not uncommon manifestation of congenital syphilis. It is rarely observed in acquired syphilis and occurs in association with tabes and dementia paralytica. When occurring in tabes, it has been shown to be favorably influenced by therapy. Three illustrative cases are reported. The author is of the opinion that the occurrence of this condition in acquired neurosyphilis indicates a similarity to congenital syphilis in respect to bodily reactions of allergy and immunity to the spirochete.

EYE CHANGES OBSERVED IN PARETIC PATIENTS AFTER TREATMENT WITH MALARIA. C. P. CLARK, Am. J. Ophth. **13**:946 (Nov.) 1930.

This paper is based on observations in the treatment of fifty patients. The author concluded that inoculation with malaria is beneficial in syphilis of the optic nerve and visual pathways. Of twenty-eight patients with Argyll Robertson pupils, twenty-two regained normal pupillary reactions following the treatment; definite improvements in the visual field occurred in four, and improvement in the eyegrounds in twelve. The mental condition of many of these patients eliminated subjective examinations. The improvements noted were attributed to stimulation of the defense reactions of the reticulo-endothelial system, elevation of body temperature and hyperemia of the disk.

ARGYROSIS CORNEAE. B. FRIEDMAN and A. RÖTTH, Am. J. Ophth. **13**:1050 (Dec.) 1930.

Argyrosis of the conjunctivae is reported as frequent where trachoma is prevalent because of the usual long-continued treatment with silver nitrate. It is also found in silver workers. The authors examined twelve patients with conjunctival argyrosis and observed a distinct golden to greenish-blue discoloration of the posterior corneal surface in ten cases. The layer of pigment was probably between Descemet's membrane and the epithelium. In several cases there was argyrosis of the lens.

SYPHILITIC IRITIS. J. E. MOORE, Am. J. Ophth. **14**:110 (Feb.) 1931.

The author presents a comprehensive study of 249 cases of syphilitic iritis occurring among 10,000 syphilitic patients. Of these patients, 111 had early secondary syphilis; 29 had recurrent secondary syphilis, and 109 had late manifestations of the disease. This condition was more frequent in males than in females, and twice as common in Negroes as in white patients. Iritis was observed twice as frequently in recurrent secondary syphilis as in early secondary syphilis though found in approximately 5 per cent of the latter group. The Wassermann reaction of the blood was positive in 97 per cent of the early cases, in 81 per cent of the late cases and in 55 per cent of the recurrent cases. In recurrent secondary syphilis, iritis was usually unilateral, and in 7 of 29 cases it was associated with neurosyphilis though lumbar puncture indicated that asymptomatic neurosyphilis was no more frequent in patients with iritis than in those without it. Recurrent iritis usually appears within the first four months after inadequate treatment for early syphilis, while late iritis usually appears on an average of nine years after infection. The therapeutic test for diagnosis is not to be depended on in late cases because of the slow response to treatment, and confusion in diagnosis may result. The treatment for syphilitic iritis is that of general syphilis and should be carried out in cooperation with a syphilologist. The prognosis is usually good.

H. R. FOERSTER, Milwaukee.

CONCEALED CANCER OF THE TONGUE. W. F. MACFEE, Ann. Surg. **93**:481 (Feb.) 1931.

Diagnostic failure in cancer of the tongue is due either to mistaking the lesion for a noncancerous condition or to failure to discover a partially concealed lesion. Of 70 cases reviewed, more than 20 per cent fall into the latter group. Concealment may be due to the situation of the lesion deep in tissues or at points of angulation of the lingual mucosa. Ulceration is extremely variable, and may be very slight in deeply invasive types. Examination of the posterior third of the tongue by means of a mirror and thorough palpation are essential, and relaxation of the tongue during palpation is important. The symptomatology is unreliable; for example, pain may be referred to the ear, to areas of vagus distribution, etc. Awkwardness in control of the tongue and sensory disturbance other than pain are also frequent early symptoms. When doubt exists, a biopsy should be done. Biopsy on 825 cases of carcinoma of the tongue was done at Curie Institute without aggravation of the disease. The prognosis in concealed cancer of the tongue is generally worse than in the obvious growths, because of the usually late discovery and the usual proximity to structures adjacent to the tongue.

VARICOSE VEINS: INDICATIONS AND CONTRAINDICATIONS TO INJECTION. NORMAN J. KILBOURNE, Ann. Surg. **93**:691 (March) 1931.

The author presents an interesting clinical analysis of the subject based on his own observations. Thrombo-angiitis obliterans and senile arteriosclerosis of the legs are considered definite contraindications by the author; he cites clinical

examples to prove his argument. Distant uncorrected foci of infections are held to be no contraindication. A past history of phlebitis presents an individual problem in each case, the possibility of stirring up old infection being the main point to be decided. A consideration of the controversy and additional observations by the author on the subject of selection of patients for injection from those who have had phlebitis previously are presented. L. M. WIEDER, Milwaukee.

THE IMPORTANCE OF DIET IN PREVENTING ACUTE YELLOW ATROPHY DURING ARSPHENAMINE TREATMENT. E. B. CRAVEN, JR., Bull. Johns Hopkins Hosp. **48**:131 (March) 1931.

In 1919, Davis and Whipple concluded that diets rich in carbohydrates exerted a marked protective action against injury to the liver by chloroform, whereas diets rich in fat and protein afforded a maximum susceptibility to such injury. Since that time various clinicians have assumed that these conclusions might be applied to the toxic affects of arsphenamine.

In a carefully controlled series of experiments on dogs, Craven concluded that diets high in fat and protein provide the maximum protection against injury to the liver by arsphenamine, and that of these two diets, the one high in fat is more efficacious; that diets high in carbohydrates afford maximum susceptibility to such injury, and that starvation is important as a predisposing factor. This article should be read in full (ten pages) by all syphilologists.

ANDERSON, Los Angeles.

TREATMENT OF GANGRENE DUE TO THROMBO-ANGIITIS OBLITERANS. SAUL S. SAMUELS, J. A. M. A. **96**:751 (March 7) 1931.

These cases should be treated conservatively, by means of rest in bed, cessation of smoking, cleaning baths, the application of anesthetic ointments and the intravenous administration of large amounts of fluids. Amputation is resorted to only when it is apparent that the gangrene will destroy so much tissue that a nonfunctioning foot will be the ultimate outcome. If conservatism is practiced the prognosis in these cases is much more favorable than it used to be. A case in point is cited.

HERPES ZOSTER WITH VARICELLA. R. R. MCCORMICK, J. A. M. A. **96**:766 (March 7) 1931.

Four cases of herpes zoster in persons who were in contact were seen in the midst of a rather severe epidemic of varicella. On the twelfth day following the appearance of the herpes zoster, a generalized varicella-like eruption that was extensive and involved also the mucous membranes developed in one of these patients. The lesions became gangrenous, and sepsis set in with a fatal termination. An infant was inoculated with some of the vesicular fluid with the development of a slight local reaction. On subsequent exposure to cases of varicella, no vesicular eruption developed. Necropsy revealed inflammatory and gangrenous involvement of all layers of the skin and a posterior poliomyelitis in the cord. This is described in detail.

NICKEL DERMATITIS. EVERETT S. LAIN, J. A. M. A. **96**:771 (March 7) 1931.

Three cases were observed in which an erythematous papular eruption appeared behind the ears and horizontally on the temples. The eruption was caused by spectacle frames made of white gold, an alloy containing nickle. The eruption appeared after the patients had perspired freely. The perspiration, which is an electrolyte, acts on the base to form nickel salts which cause the irritation.

A Case of Urticaria and Toxic Erythema Following the Administrations of Mono-Iodo-Cinchophen. Thomas H. Miller, J. A. M. A. **96**:772 (March 7) 1931.

In the case reported, after the patient had taken the drug daily for one week, a severe urticaria and toxic erythema with vomiting, anorexia and vertigo developed, but there was no jaundice or other clinical evidence of damage of the liver. The scratch and percutaneous tests with mono-iodo-cinchophen gave negative results, and because of this, it was thought that the reaction resulted not from a hypersensitivity to the drug as such but rather from toxic substances liberated by the liver or the gastro-intestinal tract.

Tularemia from the Fox Squirrel. Tom Kirkwood, J. A. M. A. **96**:941 (March 21) 1931.

A case of ulceroglandular type of tularemia developed after dressing a fox squirrel. The case is reported from Illinois and is said to be the first time this animal is reported as a host. The agglutination test of the blood gave negative results on the eleventh day, but was positive on the seventeenth day.

H. Rattner, Chicago.

Linseed Dermatitis. M. H. Barnes, J. Indust. Hyg. **13**:49 (Feb.) 1931.

There is an abnormal labor turnover among linseed oil crushers owing to the necessity of changing jobs because of the development of dermatitis. The dermatitis is characterized by intense itching and burning of the dorsa of the hands, sometimes of the flexor surface of the forearms, the anterior part of the thighs, etc., followed by the appearance of an inflammatory macular and papular eruption. Most of the pressroom workers develop the condition sooner or later; however, it is not serious and usually disappears on transfer of the worker. The author concluded from his experiments that neither pure linseed oil nor impurities, such as strange seeds, chaff, etc., are causes of the dermatitis, but that an undetermined cutaneous irritant contained in the residue of the cake is responsible for the dermatitis.

Wieder, Milwaukee.

Filtered Roentgen Rays in the Treatment of Keloid. Cornelius V. Kilbane, New England J. Med. **203**:1238 (Dec. 18) 1930.

Fifty-three cases of keloid are reviewed in which treatment was given by roentgen rays at the Massachusetts General Hospital. One millimeter of aluminum was used as a filter, and a dose of nine-tenths skin unit with a 6 inch spark gap and 5 milliamperes was used in practically all of the cases. Excellent results were obtained in thirty-three cases and good results in eleven, while only six patients showed poor results and four of those should have had more treatment. No unsatisfactory end-results or sequelae were noted.

The Effect of Calcium in Pruritic Skin Affections: With Especial Reference to Calcium Gluconate. J. G. Downing and A. Blumenfeld, New England J. Med. **204**:250 (Feb. 5) 1931.

Twenty cases of itching dermatoses are reviewed. Calcium gluconate was used orally, intravenously and intramuscularly, the latter being the preferred route for injection. Ten cubic centimeters of the 10 per cent solution was injected daily, and a teaspoonful of the powdered form was given three times a day. There was noticeable relief from itching and tension. The best results were obtained in dermatoses with itching due to chemicals used either internally or externally, such as dermatitis medicamentosa and dermatitis venenata.

C. Guy Lane, Boston.

THALLIUM AND ITS RISKS. JAMES A. MILNE, Brit. M. J. **1**:473 (March 14) 1931.

Attention is called to the added risk of giving a second dose of thallium. A child, aged 5, was given thallium acetate for ringworm of the scalp. Because of inefficient depilation, she was given a second dose two months later. There was no untoward reaction the first time, but after the second dose, she suffered from severe collapse and repeated vomiting.

H. RATTNER, Chicago.

LEPROSY AND SYRINGOMYELIA: THE SECRETION OF SWEAT IN THE TWO DISEASES; THEIR DIFFERENTIAL DIAGNOSIS BY IONIZATION WITH PILOCARPINE. E. JEANSELME and R. GIRAUDEAU, Ann. de dermat. et syph. **2**:177 (Feb.) 1931.

Lepropsy is difficult to diagnose when pain and thermal sensations alone are affected. Under these conditions it is possible to confuse it with syringomyelia. The authors' researches proceeded from this point. They studied the secretion of sweat provoked locally by ionization with pilocarpine, incorporating the drug in a suitable ointment base. Besides studying leprosy and syringomyelia, they observed the effects of this procedure in normally innervated areas and in zoster.

In normal subjects, they found that local anesthesia prevented a response of the sweat glands to ionization with pilocarpine. Their observations show that there are peripheral secretory centers coexisting and cofunctioning with centers in the medulla and cerebrum. Interference with the peripheral centers by section or anesthesia of the nerve supplying the area nullifies the action of pilocarpine.

In leprosy a profound but variable interference with the function of sudation, as measured by the authors' experimental procedure, was found. In only two of their cases was there a normal response. These cases showed no changes of innervation; all the others showed some alteration in sudation.

In syringomyelia there was always a normal response of the sweat glands to ionization with pilocarpine.

It thus appears that leprosy and syringomyelia conform to the rule demonstrated by investigation of normal and experimentally, or otherwise, altered innervation. The former disease, affecting the peripheral nerves, shows changes in the response of the sweat glands; the latter, based on disturbance in the spinal cord, shows no abnormal response.

WOOD-CUTTER'S ECZEMA. W. DUBREUILH, Ann. de dermat. et syph. **2**:199 (Feb.) 1931.

Largin, in the *Annales* for February, 1929, reported eczematous eruptions in wood-choppers. Dubreuilh has also seen these eruptions and reports six cases. The eruption is caused by constituents of bark; planks and saw-dust seem inoffensive. The majority of Dubreuilh's cases were due to oak. It is not necessary that the wood be freshly cut—one patient was affected by wood cut a year previously—but moist wood is much more offensive than dry. Direct contact with the irritant is necessary to produce the eczema. As in rhus dermatitis, transfer to the other regions of the body occurs. Personal susceptibility, as in all eczemas, is a predominating factor. The eruption in Dubreuilh's cases were mainly of the erythematosquamous type.

MICROBIC PARAKERATOSES OF THE FINGER-TIPS. R. SABOURAUD, Ann. de dermat. et syph. **2**:206 (Feb.) 1931.

Sabouraud discusses the fairly common scaling lesion of the finger-tips which is usually diagnosed as eczema. The lesion is dry and the epidermis partly peeled off, leaving little adherent fringes. Sometimes superficial fissures occur. The course of the disease is chronic. This eruption is always preceded by a paronychia due in most cases to a streptococcus and in a few to a staphylococcus. These

organisms can be cultivated from the dry lesions. The eruption may be confused with a fungus infection, but the latter usually favors the interdigital folds and involves the finger-tips only by extension. In treatment, Sabouraud recommends iodine in alcohol (1 per cent) followed by a tar salve. For the mycotic cases, Whitfield's ointment is preferable to tar.

THE HEREDITARY TRANSMISSION IN CHICKENS OF DEPIGMENTED PLUMAGE ACQUIRED BY HYPERTHYROIDIZATION: ANALOGY WITH SYMPTOMS OBSERVED IN HUMAN HYPERTHYROIDISM. P. SAINTON and H. SIMONNET, Ann. de dermat. et syph. **2**:211 (Feb.) 1931.

The authors noted that in fowls the color of plumage that had been depigmented by induced hyperthyroidism never returned to normal. They mated a cock and two hens with depigmented feathers, and found that the acquired characteristic was transmitted to the off-spring. They found certain analogies in human beings; for instance, a white streak of hair in a patient with hyperthyroidism had been transmitted through three generations. They also saw the occurrence of exophthalmic goiter in the daughter and granddaughter of a patient whose hair was prematurely gray, and other instances of the association of premature canities and hyperthyroidism.

The authors do not think that it is a simple coincidence that exophthalmic goiter and canities exist in ascendants and descendants. They construe these manifestations as symptoms of hyperthyroidism, the former full-blown, the latter monosymptomatic.

MORPHOLOGY OF THE AURIDS: ATTEMPT AT THEIR CLASSIFICATION. F. LEBEUF and H. MOLLARD, Ann. de dermat. et syph. **2**:214 (Feb.) 1931.

The authors define aurids as eruptions of the cutaneous and mucous membranes due to therapy with gold compounds. In conformity with the present trend in nomenclature, this neologism should be acceptable.

Aurids have been observed almost from the beginning of chrysotherapy. In the earlier years of this treatment, they were more numerous and redoubtable; with the reduced dosages of more recent years, they have become scarcer and less formidable. All the salts of gold give rise to them.

Of the aurids of the mucosa, stomatitis is well known. It may occur alone or in association with cutaneous lesions. It is characterized by the extent of the lesions, their white color, pain and the absence of salivation. Of the cutaneous aurids, all but the erythroderma are mild manifestations. The erythemas may be either localized or generalized. Purpura, pruritus, urticaria and eczematiform eruptions have been reported. Among the rarer eruptions caused by such treatment are those resembling lichen planus, granuloma annulare and pigmentations. Eruptions also occur in patients with active tuberculous lesions resembling lichen scrofulosorum or papulonecrotic tuberculids. Focal reactions in cutaneous tuberculosis occur.

The erythrodermas are the most serious of the aurids. While they may be localized, they are more often generalized, and seem to develop with particular frequency in psoriatic patients. Most of these cases have ended favorably, but a few deaths have been recorded. However, therapy with gold compounds has proved so valuable that its benefits far outweigh its dangers.

MICHAEL, Houston, Texas.

THERAPEUTIC SENSITIZATIONS. FOVEAU DE COURMELLES, Bull. et mém. Soc. de méd. de Paris, Feb. 28, 1931, p. 120.

According to the author, the response of an organism to any therapy may depend on the simultaneous or successive use of another agent. Not only drugs and radiations, but also traumatisms, surgical operations and even emotions may sensitize the body and make it responsive to the action of another agent. Exposure

to the sun or ultraviolet rays often makes the organism more sensitive to roentgen rays; also certain coloring drugs (for example, methylene blue [methylthionine chloride, U. S. P.]) may do the same. Roentgen rays may often sensitize a tumor to radium, so that the tumor, though refractory to roentgen rays, responds favorably to the action of radium. By treating tissues with eosin and exposing them to ultraviolet rays, the author achieved the effect of treatment with roentgen rays. By applying zinc sulphate to lupus tissue and irradiating it with infra-red light, the author and Jaques Risler succeeded in producing a cure, similar to that produced with the use of ultraviolet rays. Certain drugs and agents act as antagonists to each other. Thus infra-red light may be used to heal the damage done by ultraviolet rays, roentgen rays or radium. When the history of a patient is taken it is therefore important that he be questioned not only about previous illness and hereditary factors, but also about previous therapy with drugs or other agents.

Syphilitic Contaminations Before the Appearance of the Chancre. E. Schulmann, Bull. et mém. Soc. de méd. de Paris, Feb. 28, 1931, p. 127.

The author reports a case of syphilitic contagion eight days before the appearance of the chancre, and has found eight similar cases in the literature. The dates of contamination vary from four to twelve days before the appearance of the chancre and the course of such an infection does not differ in any way from the usual syphilitic infection.

Such contagion may be explained by a microscopic lesion, which is in accord with the experimental work done by Levaditi and Yamanouchi. But it is possible that the sperm and even the blood may be the carrier of the spirochete. The author is against preventive treatment in the case of a possible contamination, for the patient, in case he really has been infected, is not usually given sufficient treatment.

Bloom, New York.

Eczema Solare with Sudden Generalization Cured by Auto-Urotherapy. H. Jausion, E. Carrot and A. Gibert, Bull. Soc. franç. de dermat. et syph. **38**:9 (Jan.) 1931.

For eight years during the summer, a papulovesicular eruption had developed on the back of the patient's hands and retro-auricular grooves after exposure to the sun. During the last attack he applied an ointment, and a rapid generalization of the eruption followed. The eruption involuted after the institution of auto-urotherapy, which the authors have found efficacious in treatment for eczema.

Primary Actinomycosis of the Submaxillary Gland Treated by Roentgen Therapy. Chompret and Dechaume, Bull. Soc. franç. de dermat. et syph. **38**:14 (Jan.) 1931.

The condition began with a tumefaction beneath the tongue. It was diagnosed as a stone in Wharton's duct, and incision was performed. Pus that escaped at the time of incision revealed *Actinomyces*. As there was practically no response to treatment with iodide, roentgenotherapy was instituted and led to a cure in about two months.

Necessity of Large Doses of Iodides in Actinomycosis. Lortat-Jacob and P. Garnier, Bull. Soc. franç. de dermat. et syph. **38**:18 (Jan.) 1931.

The authors treated a patient with a severe case of this disease involving the face, neck and thorax. After doses of 4 Gm. of potassium iodide a day had failed to influence the condition, the dose was doubled, and this plus evacuation of collections of pus led to a cure. The case was presented to show that in actinomycosis, large doses of potassium iodide are indicated.

RAPID CURE OF ARSPHENAMINE DERMATITIS BY INJECTIONS OF HEPATIC EXTRACT. M. PINARD and CORBILLON, Bull. Soc. franç. de dermat. et syph. **38**:32 (Jan.) 1931.

A severe arsphenamine dermatitis developed during the first course of neoarsphenamine in treatment for primary syphilis. The patient was given daily injections of liver extract. After eight injections, the disorder had disappeared except for moderate desquamation.

POSTERUPTIVE LEUKOMELANODERMAS. GOUGEROT, P. BLUM, J. MEYER, R. COHEN and J. WEIL, Bull. Soc. franç. de dermat. et syph. **38**:41 (Jan.) 1931.

Gougerot and his collaborators present examples of leukoderma following various diseases: pityriasis versicolor, mycoses, eczema, prurigo and psoriasis. Investigations with the quartz lamp show that these posteruptive leukodermas react to irradiation in one of three ways: (1) absence of reaction; (2) erythematous reaction without pigmentation, and (3) erythema followed by pigmentation. These leukodermas may be discussed under two hypotheses; either they are "contrast" reactions, or they are due to interference with the physiologic function of pigmentation.

ZOSTER APPEARING DURING AUTOHEMOTHERAPY. GOUGEROT AND J. WEILL, Bull. Soc. franç. de dermat. et syph. **38**:48 (Jan.) 1931.

Zoster developed on the lower flank and abdomen following one injection of the patient's own blood for an apparently occupational eczema of the hands. The treatment was continued, though each of the next two injections was followed by a new patch of the lesions.

NEURALGIA DUE TO THE ADMINISTRATION OF A GOLD COMPOUND. H. GOUGEROT, Bull. Soc. franç. de dermat. et syph. **38**:53 (Jan.) 1931.

The patient had received fifty-three intragluteal injections of a gold compound for lupus erythematosus. The next injection produced severe neuralgic pain, widely distributed, and was accompanied by nitritoid symptoms. The condition continued about twenty-four hours.

IRREDUCIBLE WASSERMANN REACTION: INCREASE OF BLOOD CHOLESTEROL; PARALLELISM OF THE WASSERMANN REACTION AND CHOLESTEROL. GOUGEROT and RAGU, Bull. Soc. franç. de dermat. et syph. **38**:53 (Jan.) 1931.

In studying the pathogenesis of Wassermann-fast cases, Gougerot and Ragu noted, among other things, an increase in blood cholesterol. In three cases, they showed the parallelism between the Wassermann reaction and the values for cholesterol. When the blood cholesterol was reduced by means of insulin, cholagogues, etc., the previously positive Wassermann reaction became negative. In one case, when the figure for blood cholesterol again mounted above normal, the positive Wassermann reaction returned. Because of the paucity of cases, conclusions are not yet in order.

TREATMENT FOR FURUNCULOSIS WITH ULTRAVIOLET LIGHT. J. MEYER and NICOLLE, Bull. Soc. franç. de dermat. et syph. **38**:57 (Jan.) 1931.

For five years, Meyer and Nicolle have been employing ultraviolet light in the treatment for furunculosis with satisfactory results. They use a carbon arc light, as the mercury vapor lamp has not given good results. They give general irradiations to the body (minimum erythema doses), regional treatment (more intense erythema doses) and local applications (cautery effects by concentration through a lens). These last are reserved for large isolated lesions. They are painful and therefore the beam of light must be discontinued after application for

a few seconds. As adjuvants, weak ichthyol lotions and general measures are used according to the indications. Contraindications to this treatment are exceptional.

CONTRIBUTION TO THE ETIOLOGY OF GLOSSITIS EXFOLIATA AREATA. A. DESAUX, Bull. Soc. franç. de dermat. et syph. **38**:60 (Jan.) 1931.

Desaux reports a case of this disorder with smooth patches associated with urticaria. The urticaria was of multiple etiology. It was noted that whenever a severe attack of urticaria occurred, the disorder of the tongue as well as glossalgia appeared simultaneously. The association was so striking that a common etiology seemed certain.

THE ETIOLOGY OF GRANULOMA ANNULARE. A. KISSMEYER, Bull. Soc. franç. de dermat. et syph. **38**:64 (Jan.) 1931.

While the majority of writers ranged granuloma annulare among the manifestations in the skin associated with tuberculosis, Kissmeyer recalls that there is no direct proof of such an association. Recently, Martenstein placed granuloma annulare among the skin tuberculoses of the sarcoid reaction type for the following reasons: (1) commonness of specific anergy; (2) enlargement of the hilus lymphatic glands, and (3) the presence of serum procutines and anticutines. On the basis of ten personally studied cases, Kissmeyer discusses the question particularly from the standpoint of Martenstein's observations.

Of Kissmeyer's ten patients, four were less than 10 years of age and gave negative reactions to cutaneous tuberculin tests. Three were between 10 and 20, and three between 20 and 30 years of age. Of these, two gave negative reactions to tuberculin tests, while the others were not tested. Kissmeyer sees nothing extraordinary in the negative reactions to tuberculin tests in childhood and adolescence, and he thinks that no deductions can be made from them at these ages. Kissmeyer's investigation of anticutines and procutines (in connection with sarcoid) convinced him that these substances occurred in such an irregular manner that they could not be used as a basis for the presence or absence of tuberculosis. In the ten cases of granuloma annulare, no evidence of pulmonary tuberculosis or of involvement of the hilus glands was found by radiography. In five of the cases search for Koch's bacillus in the blood by Lowenstein's method gave negative results. Kissmeyer therefore concludes that the tuberculous etiology of granuloma annulare is unproved. For the present, granuloma annulare should be regarded as benign, infectious and perhaps of specific origin but different from Boeck's sarcoid.

TREATMENT FOR LOCALIZED PRURITUS BY INJECTIONS OF ALCOHOL. G. WEIL, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**:89 (Jan.) 1931.

Weil reported two cases of pruritus vulvae in which injections of alcohol produced complete relief. These were cases occurring at the menopause which had been resistant to various therapeutic attempts.

LYMPHOGRANULOMATOSIS INGUINALE: INTRADERMAL REACTIONS AND INTRADERMAL INOCULATIONS OF PRODUCTS OBTAINED BY CURETTAGE OF THE INFECTED GLAND. J. NICOLAS, M. FAVRE and F. LEBEUF, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**:105 (Jan.) 1931.

In a typical case of this disorder, the intradermal reaction to a specific antigen was at first negative, but later became positive. The original negative reaction was explained by the fact that sufficient time had not elapsed since the beginning of the infection for an allergic state to have developed. An intradermal test with products obtained by grattage of the glands gave negative results. This result is important in view of the recent work of Ravaut on this question.

INTRADERMAL INOCULATIONS IN CHANCROID. J. NICOLAS, F. LEBEUF and H. WEIGERT, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**: 106 (Jan.) 1931.

In view of the recent reports of Ravaut, Rabeau and Hesse (*Bull. Soc. franç. de dermat. et syph.*, May, June and July, 1930), the authors report the results of their investigation of the inoculation of chancroid material in four cases. In all four cases, Dmelcos' reaction was positive. Cutaneous scratch tests with pus from the lesions gave uniformly negative results. In two of the cases intradermal inoculation of pus from the lesions gave rise to chancroids. In one case, pus from a bubo when injected intradermally gave rise to a chancroid, and in another to a simple papule. Frei's reaction for lymphogranulomatosis inguinale was negative in all four cases. Moreover, the authors have tried this reaction in a number of cases of chancroid and have never obtained a positive result. These facts demonstrate that lymphogranulomatosis is neither an atypical nor a larval form of chancroid.

PIGMENTATION OF THE SKIN FOLLOWING THE ADMINISTRATION OF GOLD COMPOUNDS (CHRYSOCYANOSIS): REPORTS OF THREE CASES IN TUBERCULOUS CHILDREN SUBMITTED TO PROLONGED TREATMENT. L. NOVÉ-JOSSERAND, GATÉ, CHARPY, JOSSERAND and P. CUILLERET, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**:117 (Jan.) 1931.

The authors report three cases of a discoloration of the skin following prolonged, continuous intravenous injections of gold compounds given for pulmonary tuberculosis. The injections were given weekly for over two years and were unattended by other signs of intolerance. The pigmentation, of a violaceous or cyanotic color, was confined to the uncovered parts of the face and neck. The hands were spared. It developed insidiously.

A similar case has recently been described in the German literature by Zimmerli and Lutz under the title of "Chryosis." A localized case (Schamberg) and a generalized melanoderma (Schlossberger) have been reported.

BISMUTH POLYNEURITIS. J. NICOLAS and C. PÉTOURAUD, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**:140 (Jan.) 1931.

The patient had tertiary syphilis and lupus vulgaris. She received twelve injections of bismuth, and three weeks after the last injection, fever, paresthesias and pain in the extremities developed. Recovery followed three weeks' rest in bed. The authors have not seen a case of polyneuritis from the injection of bismuth recorded in the literature, though they do not think their case unique.

ERYTHRODERMA AND POLYNEURITIS FOLLOWING THE ADMINISTRATION OF GOLD COMPOUNDS. F. LEBEUF, C. PÉTOURAUD and H. MOLLARD, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**:142 (Jan.) 1931.

Following six injections of a gold salt in small doses, the patient developed a diffuse erythroderma and intense hyperesthesia of the palms and soles. There was moderate pain in the nuchal region and some vesicles on the buccal mucosa. Erythroderma following the administration of gold compounds is fairly frequent, but polyneuritis is uncommon. In the present case, the symptoms of intolerance disappeared in about one month.

THE ACHROMIC FORM OF PITYRIASIS VERSICOLOR. J. GATÉ, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**:144 (Jan.) 1931.

Gaté reported a typical case of the depigmented variety of pityriasis versicolor. In the scales of one of the few active lesions *Malassezia furfur* was found. Gaté

is of the opinion that the depigmentation is due purely to the filtering out of light by the scales and the parasite. It is achromic only by contrast with the surrounding tanned skin.

FAVUS WITH LESIONS ON THE GLABROUS SKIN. J. GATÉ, G. MASSIA and TREPPOZ, Bull. Soc. franç. de dermat. et syph. (Réunion dermat., Lyon) **38**: 146 (Jan.) 1931.

In an infant, aged 2 years, favus of the scalp with generalized pityriasiform lesions were present. Scales from the latter cultivated and examined under the microscope showed *Achorion*. In the preparation of the scales, *Mycelia* resembling *Microsporon* were found, but the cultures never showed fungi of the *Trichophyton* type. The authors call special attention to this condition, since error may occur if cultures are not made.

MICHAEL, Houston, Texas.

UNDER WHAT CONDITIONS IS SYPHILIS CURABLE? J. NICOLAS and J. GATÉ, La Race et Les Moeurs, February, 1931, p. 25.

Since the war realization has been more and more common that the early discovery of a venereal infection, particularly syphilis, and its systematic treatment are the best guarantee for the future of the afflicted persons and the surest means for the protection of society. Dr. Fauvre and his successor, Dr. Cavaillon, as chiefs of prophylaxis of venereal diseases in the Ministery of Hygiene, with the collaboration of dermatosyphilologists, have made a success of the antivenereal dispensaries. According to the authors, two things are important for the successful fight against venereal disease: 1. People should know the importance of presenting themselves to the clinic at the slightest suspicious sign of a venereal infection for their own immediate interest and in the interest of family and society. 2. It should be generally understood that only such cases as are seen within a few days of the appearance of the chancre, before a positive serologic reaction is present, can be cured. Most syphilographers agree that at the present state of our knowledge neither a clinical nor a serologic criterion of a cure for syphilis exists. Syphilitic patients should, therefore, be instructed in the necessity of energetic treatment for four or five years and of milder treatment for a much longer time, if not consistently throughout their entire lives.

BLOOM, New York.

ATYPICAL PSORIASIS WITH INVOLVEMENT OF THE MUCOUS MEMBRANE OF THE MOUTH. K. SCHREINER, Dermat. Wchnschr. **92**:237 (Feb. 14) 1931.

A man, aged 25, presented psoriasis involving the scalp, palms, soles and nails. Plaques were also present on the lips and on the hard palate. The histologic picture of the lesions of the mucous membrane was similar to that of psoriasis of the skin. The eruption in the mouth developed with that of the psoriasis elsewhere and regressed in the same degree under intensive treatment with arsenic.

CONTRIBUTIONS TO THE PATHOGENESIS AND ETIOLOGY OF ERYTHEMA NODOSUM. GEDEON DÓCZY, Dermat. Wchnschr. **92**:241 (Feb. 14) 1931.

The author briefly reviews some of the recent literature on erythema nodosum and concludes that there is no single etiologic explanation for this condition. In his study of eight cases he finds an instability of the sympathetic nervous system and also notes a tendency toward acidity of the urine.

TWO INDIGENOUS CASES OF MYCETOMA WITH BLACK GRANULES. B. BERON, Dermat. Wchnschr. **92**:265 (Feb. 21) 1931.

Three patients who had never been out of Bulgaria in whom mycetoma occurred are described. Two of these were brothers, aged 12 and 7 years, who ordinarily

went barefoot. The third was a woman of 26 who had not gone barefoot for ten years except occasionally in her vineyard. In each case the sole, toes and dorsal surface of one foot presented nodules, some of which developed fistulas that discharged foul smelling pus containing black granules. These granules consisted of mycelia. Cultures demonstrated a fungus belonging to the group of *Actinomyces.* This fungus was shown to be pathogenic for guinea-pigs and rabbits.

A Specific Method in Treatment for Leprosy. A. Paldrock, Dermat. Wchnschr. **92**:273 (Feb. 21) 1931.

The author's treatment for leprosy consists essentially in freezing ten lesions every two weeks with carbon dioxide snow for from three to four seconds. This results in auto-immunization, with an improvement in the untreated as well as in the treated lesions. The treatment is continued for four months, after which a series of injections of a gold compound is given. Patients have remained clinically and bacteriologically cured for as long as five years. General symptomatic treatment is carried out in conjunction with the specific routine, nourishment and exercise being stressed.

A Case of the Transference of Congenital Syphilis to the Second Generation. Margot Hech-Eleda, Dermat. Wchnschr. **92**:309 (Feb. 28) 1931.

The grandmother of the patient presented signs of tertiary syphilis with a positive serology. The mother, with no history of acquired syphilis, gave a positive Müller reaction, though the Wassermann reaction of her blood was negative. The father's serum gave negative reactions to syphilitic tests. The patient, aged 8 years, as well as her younger brother, presented signs of congenital syphilis and positive serology.

The Bullous Vegetative Form of Erythema Exsudativum Multiforme. L. N. Maschkilleisson and S. A. Potapow, Dermat. Wchnschr. **92**:341 (March 7) 1931.

A bullous and vegetative eruption developed rapidly on the face and lips of a man, aged 27, following severe prodromal symptoms. This cleared within a few weeks. The literature concerning erythema multiforme with vegetative lesions is reviewed, and the differential diagnosis is discussed.

Cutis Gyrata of the Forehead with Histologic Observations. M. Ota, Dermat. Wchnschr. **92**:345 (March 7) 1931.

A patient with cutis gyrata of the forehead and entire scalp which had been present for six years is described. The skin of the face was seborrheic. Mentally, the patient was subnormal. The histologic observations consisted essentially of hyperplasia and hypertrophy of the sebaceous glands with a thickening of the connective tissue of the cutis.

The Etiology of Lymphogranuloma Inguinale. N. Latko and S. Michailow, Dermat. Wchnschr. **92**:349 (March 7) 1931.

A patient with lymphogranuloma inguinale (Nicolas-Favre disease) was studied by the authors. They recovered a diphtheroid bacillus and also a hay bacillus from the lesions. A vaccine of the diphtheroid organism was effective in producing a cure.

THE PRACTICAL AND SCIENTIFIC IMPORTANCE OF MEINICKE'S NEW MICRORAPIDREACTION. ERICH HOFFMANN, Dermat. Ztschr. **60**:221 (Feb.) 1931.

The new microrapidreaction of Meinicke is particularly useful because small amounts of serum suffice (0.2 cc.). The final result of the reaction can be read in one hour and may be photographed, preferably with the new dry dark-field apparatus of Leitz. The small amount of serum required permits tests to be run on the smaller animals used in the laboratory. False reactions occur in from 0.5 to 0.75 per cent of the cases.

A TYPE OF DISSEMINATED KERATOSIS NOT PREVIOUSLY DESCRIBED (AKROKERATOSIS VERRUCIFORMIS). GUSTAV HOPF, Dermat. Ztschr. **60**:227 (Feb.) 1931.

Two patients are described, each presenting an eruption which appeared at puberty and remained stationary for more than ten years. In the first patient, the condition was limited to the backs of the hands, while in the second, the dorsa of the feet were also involved and, in addition, tiny keratoses were present on the volar surfaces. The eruption on the backs of the hands consisted of flat, polygonal or oval lesions ranging in size from that of a millet to that of a lentil. The lesions were yellowish brown under the diascope. They were not shiny, and they became scaly when scratched. Histologically, the chief changes consisted in hyperkeratosis and a widening of the stratum granulosum without any degeneration of the cells or vacuolization. The differential diagnosis between this and other similar conditions is considered extensively. The author concludes that acrokeratosis verruciformis is a congenital condition.

A CONTRIBUTION TO THE KNOWLEDGE OF "ATROPHODERMIA VERMICULATA." L. LEVEN, Dermat. Ztschr. **60**:250 (Feb.) 1931.

A patient is described with typical atrophodermia vermiculata which had been present since birth. This was not accompanied at any time by formation of the comedones or by any inflammatory manifestation. The literature is briefly reviewed, and the author concludes that there are two groups, the one, associated with folliculitis and comedones, which should be classified as folliculitis ulerythematosa reticulata, acne vermoulante or ulerythema acneiforme; the other, a noninflammatory condition, which should be called atrophodermia vermiculata. The latter probably belongs to the nevus group.

THE COINCIDENT DEVELOPMENT OF MULTIPLE EPITHELIOMAS ON THE BODY WITH PARAPSORIASIS EN PLAQUES. WILHELM CURTH, Dermat. Ztschr. **60**:256 (Feb.) 1931.

A patient, aged 74, is described, in whom parapsoriasis en plaques developed on the trunk coincidentally with several epitheliomas. There was no apparent connection between the two conditions.

A POLYMORPHIC EXANTHEM AS A COMPLICATION OF AN ACCIDENTAL VACCINATION. S. SEREFIS, Dermat. Ztschr. **60**:260 (Feb.) 1931.

An accidental vaccination occurred in the genital region of a woman, aged 38, who had been successfully vaccinated twice before, the last time twelve years previously. During the course of the vaccinia, a generalized eruption resembling erythema multiforme developed, and regressed in four days. This complication is rare even with a first vaccination and has not been previously reported in a patient who has already had one successful vaccination. TAUSSIG, San Francisco.

EXPERIMENTS ON THE SUSCEPTIBILITY OF TUMORS AND TUMOR CELLS TO RADIATION. J. C. MOTTRAM, Acta radiol. **12**:1 (Feb. 14) 1931.

As a result of experiments on the effect of beta and gamma radiation on tumors and tumor cells of various types of sarcoma and carcinoma of rats and mice in vitro and in vivo, the author concludes that tumor cells do not vary widely in their susceptibility to radiation and that the normal embryonic squamous epithelial cell exhibits about the same degree of susceptibility. From this evidence, as well as from evidence contained in other papers by the same author, he also concludes that the wide differences in susceptibility found when tumors are radiated in vivo must be due to effects of radiation on living tissues outside the cells, and that action on the vascular supply is of importance in accounting for those differences.

L. M. WIEDER, Milwaukee.

DERMATOLOGIC ABSTRACTS

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

MULTIPLE NEUROFIBROMATOSIS. K. HOSOI, Arch. Surg. **22**:258 (Feb.) 1931.

Hosoi reports two cases of von Recklinghausen's disease, in one of which an edematous fibroma of the interior cervical and upper mediastinal regions became sarcomatous about one year after operative intervention. The microscopic picture indicated that the multiple neurofibromas originated from the perineurium. The literature on the subject of malignant transformation in multiple neurofibromatosis is reviewed.

AQUEOUS EXTRACT OF SPLEEN IN TREATMENT FOR PRURITUS AND ECZEMA. P. CHEVALLIER and L. BLOCH, Bull. et mém. Soc. méd. d. hôp. de Paris **54**: 1814 (Dec. 22) 1930.

Chevallier and Bloch report several cases that demonstrate the excellent results they have secured during the past year by using aqueous splenic extract in the treatment for pruritus and eczema. The extract used corresponds to 12.5 Gm. of fresh veal spleen per cubic centimeter. It is given in subcutaneous injection. At first the authors injected 2 cc. of the extract into the patients every two days. Later they gave doses of 4 cc. every two days. The larger doses in some cases cause a slight fever and general feeling of discomfort. The results of the treatment have never been unpleasant, however, and the fact that neither diet nor local cutaneous treatment is necessary makes the treatment with splenic extract an important therapeutic development.

ETIOLOGY OF APHTHOUS STOMATITIS. V. ZAMORANI, Clin. pediat. **12**:1095 (Dec.) 1930.

Experimental researches lead Zamorani to believe that aphthous stomatitis in children is caused by the virus of herpes simplex. In the mouths of six children with aphthous stomatitis, well differentiated from herpetic stomatitis, the author demonstrated the presence of a virus, which when inoculated into the conjunctival sac of the eyes of rabbits (through the scarified cornea) caused a typical experimental herpetic keratoconjunctivitis which confers immunity to the eye, both again a virus of the same nature as that which was inoculated and to the virus of herpes simplex. Encephalitis developed in one rabbit after the experimental lesion of the eye. Serial direct inoculation from eyes affected with experimental keratoconjunctivitis of stomatitic origin to normal eyes of other rabbits caused the transmission of the disease, which presented an intense nature even after the sixth

transfer. Bacteria cultivated from the eyes of rabbits with the experimental disease are not pathogenic to the eyes of normal rabbits. The inoculation made with filtrates of tissues affected with the disease failed to cause the experimental disease, though it conferred an attenuation of the normal receptivity of the tissues to the infection. The author says that the especial features that herpetic diseases show in children are probably due to the fact that in childhood the mucosae are more receptive than the skin to the herpetic virus.

HEMOCLASTIC TEST IN THE DIAGNOSIS OF SYPHILIS. C. VISANI and A. TANZELLA, Riv. di clin. med. **31**:1033 (Oct. 15) 1930.

Visani and Tanzella recall that the intramuscular injection of mercuric iodide (0.02 Gm.) provokes in nearly all syphilitic persons a peculiar reaction to which has been given the name of hemoclastic reaction and of which leukopenia is the most characteristic and constant exponent. While such reaction is less sensitive than the ordinary serologic test in the patients with positive Wassermann reactions, it is especially sensitive in those with negative serodiagnoses. The leukopenic crisis may be regarded as a specific expression of syphilitic infection, for it has not been found in persons with other diseases. The authors consider, therefore, that, in the present state of knowledge, the D'Amato reaction cannot replace to advantage the ordinary serodiagnostic tests, owing to its occasional absence in persons with a positive Wassermann reaction who are assuredly syphilitic. It may, however, prove useful in patients with certain localizations of syphilis, especially in the liver and the nerves, in whom the Wassermann reaction is often negative.

MEINICKE CLARIFICATION TEST, AS COMPARED WITH THE WASSERMANN TEST AND THE MEINICKE TURBIDITY TEST. E. BRACALONI and E. CIARANFI, Riv. di clin. med. **31**:1047 (Oct. 15) 1930.

Bracaloni and Ciaranfi experimented with cases in the Clinica medica of Florence to discover the value of the recent colloidal test proposed by Meinicke for the diagnosis of syphilis. They found that the clarification test is highly sensitive, rather more so than the turbidity test proposed by the same author. It is, however, subject to numerous nonspecific results. Owing to this fact and also to the possibility that in rare cases the test might give a negative result in a patient with a positive Wassermann reaction, the clarification test should not be used as the sole test in the diagnosis of syphilis, while it is yet to be proved whether the clarification test is, on the whole, preferable to the turbidity test. The authors think that if the degree of nonspecificity of the clarification test can be diminished, the slightly more complex technic of the clarification test, as compared with the turbidity test, would not be sufficient to prevent its adoption in place of the latter.

ECZEMA OF THE HEAD CAUSED BY WOMEN'S HATS. W. FREI, Deutsche med. Wchnschr. **57**:55 (Jan. 9) 1931.

In the course of the last six months, Frei observed four women with eczema of the head. That hair dyes were not the cause of this is proved by the fact that three patients never used hair dyes and that the fourth used only pure henna, which is not harmful. However, all four of the patients had worn the modern, tight fitting hats, and the eczema was located where the hats touched the head. The top of the head was free from eczema, but the peripheral portions were affected, especially the lower parts of the occiput, the tips of the ears, and the temples, and to a lesser degree the neck and the forehead. That the disturbance was due to a hypersensibility could be proved by cutaneous tests. On the basis of these tests, the author comes to the conclusion that some of the black dyestuffs used in materials in hats are particularly dangerous. The eczema, after it has once developed, is persistent; it flares up again after the least irritation. The author advises that not only the hat that caused the eczema but all of the patients'

tight fitting hats must be done away with. In regard to the diagnosis, it is added that in its later course the eczema, especially on the neck, may present the aspects of chronic circumscribed neurodermatitis (lichen Vidal); within the hairy portions, however, it appears like a seborrheal eczema, and, occasionally, a real seborrheal eczema develops. The author also points out that endocrine disturbances may perhaps be involved, because three of the four women were of the menopausal age. On the other hand, it is not impossible that the eczema developed because the hair of these women was less thick and that, as a result, the hat came in closer contact with the skin.

MODE OF ACTION OF COMMONLY USED DEPILATORIES. L. ABRAMSON, München. med. Wchnschr. **77**:2187 (Dec. 19) 1930.

Abramson points out that the claim is made that most depilatories have a more lasting effect than shaving, and that if they are used systematically for a longer period will effect a permanent depilation without injuring the skin. The author investigated the mode of action of depilatories on animals and on human beings. He found that the depilatories do not influence the intracutaneous portion of the hair, but that they become effective by a process of swelling which after from five to ten minutes makes the hairs brittle, so that they break off. The horny layer of the skin is at first not injured. However, after several applications, inflammation and eczematization sets in. In their effect on the growth of the hair the depilatories do not differ from shaving. An increased growth of hair after one or several applications could not be detected when compared with that following shaving. On account of the eczematization of the skin that follows repeated applications, the use of depilatories for therapeutic purposes should be limited. Depilatories may be used (1) for depilation in regions that are not readily accessible for razor and scissors, as for instance in the axilla, and (2) in diseases of the skin or hair in which removal of hair is therapeutically desirable but in which shaving is not advisable, for instance, in folliculitis barbae et capitis. In trichophytosis of the head or of the beard, depilatories might be better than shaving because they prevent more effectively a spreading of fungi and a reinfection of the hairs. However, in both cases depilation is usually insufficient.

SKIN CANCER: PRODUCTION BY PROLONGED ULTRAVIOLET IRRADIATION. W. PUTSCHAR and F. HOLTZ, Ztschr. f. Krebsforsch. **33**:219 (Dec. 22) 1930.

Putschar and Holtz chose rats instead of mice for their experiments because of the fact that spontaneous development of cancer is extremely rare in rats while it is relatively frequent in white mice. A strain of rats was used in 10,000 of which over a period of three years not a single spontaneous skin tumor was observed. It was found that cancer of the ear could be produced with great regularity without the aid of chemical agents by prolonged ultraviolet irradiation. The carcinomas appeared at the earliest after twenty-seven weeks of continuous irradiation. By the end of the thirty-seventh week, all the six animals had cancer. A definite relation between the color of the skin and the susceptibility to cancer was not demonstrated. The administration of viosterol changed neither the susceptibility to tumors nor their rate of growth. Changes in the elastic tissue in the skin were of a purely retrogressive nature; they did not show any relation to the development of cancer but were a manifestation of chronic ultraviolet ray dermatitis. The specific action of the ultraviolet rays consisted in the production of a periodic regeneration of the hair, with a marked increase in the number of lanugo hairs and the development of giant hairs. The authors believe that close histologic relations exist between cancer caused by ultraviolet rays in rats and the precancerous dermatoses caused by light that occur in man. The experiments prove the etiologic rôle of ultraviolet rays in cancer of the skin in human beings.

Society Transactions

THE FOUR CITIES DERMATOLOGICAL SOCIETY (CINCINNATI, CLEVELAND, DETROIT AND PITTSBURGH)

LOUIS E. VALKER, M.D., *Secretary*

Regular Annual Meeting, Cincinnati, Nov. 15, 1930

H. JERRY LAVENDER, M.D., *Presiding*

DERMATITIS FACTITIA. Presented by DR. E. B. TAUBER, Cincinnati.

M. D., a white woman, aged 35, in April, 1929, after several weeks of pain and limitation of motion of the left hip and swelling of the entire left leg, noted the development of circular, red, ulcerated areas over the left leg and thigh. These began as small erythematous areas, gradually increasing in size, becoming dark in the center and finally ulcerating. They were very painful. The lesions had healed somewhat under a variety of local treatments. In April, 1930, the patient noted small, irregular, reddish areas over the left forearm. These persisted for only a short time. At the time of presentation, there were several large erythematous lesions with some scarring from former attacks. On the inner aspect of the leg, just below the knee, there was a shallow ulceration, involving only the surface of the skin, showing the presence of minute bleeding points. This lesion was irregular in outline. No secondary infection was present. Wassermann tests and other examinations of the blood gave negative results. Bland salves and lotions were used locally as treatment.

DISCUSSION

DR. W. H. GUY, Pittsburgh: I should like to suggest self-inflicted lesions.

DR. TAUBER, Cincinnati: Various diagnoses have been made in this case. The lesions appears very suddenly. One can produce them psychologically by suggesting that they are a little worse, and the next morning the patient will have large, gyrate lesions.

DR. F. W. CREGOR, Indianapolis: I had the impression that it might be an infection due to yeast. What agent do you think she uses?

DR. TAUBER, Cincinnati: Lysol.

LUPUS VULGARIS. Presented by DR. TAUBER.

G. W., a boy, aged 12, had had the mumps about ten years previously. At that time he injured the parotid gland when he bumped into a bedpost. There was intense swelling. The gland was incised, and the condition improved. When the patient was 8 years of age, dark red papules appeared on the neck. There was a coalescing of these papules and later infiltration was noted over the right side of the neck. The condition then spread to the face. There was an infiltration and thickening on the right side of the neck, spreading just across the midline. Atrophic areas with peripheral thickening were seen centrally. Two areas on the face, one about the size of a quarter and one about the size of a dime, were the latest lesions to develop. Dark reddish papules with marked infiltration and

scaling were seen. The duration of the process was about five years. There was no adenopathy. Applications of radium were used as treatment, and the condition was markedly improved.

DISCUSSION

DR. A. P. BIDDLE, Detroit: On what did you base the differential diagnosis?

DR. TAUBER, Cincinnati: The patient in this case has been under treatment for a considerable period. When he first came in, the ulcers and also apple jelly-like nodules were present. There was infiltration of lymph. The picture of the chest was entirely normal. There was no scaling, black spots or anything indicative of lupus erythematosis. After treatment with radium the lesions immediately flattened down and were very hard. It was difficult to make a diagnosis between lupus vulgaris and lupus erythematosis.

A CASE FOR DIAGNOSIS. Presented by DR. TAUBER.

A. W., a colored man, had first noted at 12 years of age, that there was an ashy color to his ears and scaling. Small annular patches next appeared on the face, later spreading to the body. The initial lesions were brown at first, then they deepened in color and, lastly, scales appeared. There had been no itching or burning, malaise or cachexia. In 1917, the patient had a hunterian chancre. Shortly after the appearance of the chancre, the aforementioned lesions enlarged and took on a scaly appearance. Within the past few years, the condition had become worse and at presentation, it involved the entire body, the most typical lesions being on the elbows and knees. These lesions showed a pale redness, with a fine pityriasic desquamation. The lesions were raised, with sharp borders, and the surface beneath the scales was bright and waxy. There were no subjective symptoms. The Wassermann test and other examinations of the blood gave negative results. The condition had been treated locally with chrysarobin and white precipitate, and it still persisted at the time of presentation, only petrolatum being used to soften the lesions.

DISCUSSION

DR. GUY, Pittsburgh: This was one of the most interesting cases of the entire group. The difficulties in arriving at the diagnosis were extraordinary. The picture seems to fall in line with a syphilitic process, if one takes into consideration the amount of treatment and the activity of the process at the present time. The lesion is distinctly papular and mahogany-colored. The process began on the ears, where there was a suggestion of an atrophic process.

DR. F. J. EICHENLAUB, Washington, D. C.: Dr. Guy has expressed the difficulties of diagnosis in this case. The patient might have had psoriasis, but the fact that the lesions were indurated and papular and certainly not scaling to any great extent rules that out. The color of the lesions is what in the colored skin is typical of syphilis. My impression is that, in spite of the long duration and taking into consideration the color and induration of the lesions, the condition is syphilis of a resistant type.

DR. W. J. HIGHMAN, New York: Despite what Dr. Eichenlaub said, I should like to go on record as believing the condition to be psoriasis. In nearly all Negroes who have had a chronic inflammatory condition, a pigmentation remains. The lesions on the lips and nose certainly appeared definitely scaling.

DR. E. W. NETHERTON, Cleveland: The lesions on the lips and buttocks are suggestive of syphilis. It also might be the toxic agent due to an eruption caused by drugs.

ICHTHYOSIS. Presented by DR. CLASSENS.

H. M., a man, aged 40, had had the present condition since birth, with marked dryness and scaliness of the skin, the so-called fish-skin. Frequently, an ulcer had developed on the hands. There was a generalized thickening of the skin, with

a marked desquamation, giving the appearance of fish scales. There were superficial ulcers on both wrists, knees, ankles and abdomen. The Wassermann test and other examinations of the blood gave negative results.

DISCUSSION

DR. WORTHHEIMER, Pittsburgh: This case is similar to one that Dr. Busman of Pittsburgh showed us. Dr. Busman had obtained satisfactory results by the following method: In stubborn cases of ichthyosis the patient is placed on a fat-free diet, and then 3 per cent sulphonated bitumen N. F. and 1 per cent zinc oxide and 15 grains (0.972 Gm.) of sodium thiosulphate enteric coated is administered by mouth, three times a day. Recently I saw a patient with ichthyosis, a very stubborn case in which this treatment had been given with excellent results. I am unable to say just what the results would be in this particular form of case, but according to Busman, these patients showed a marked improvement.

DR. SCHEAR, New York: The interesting feature of this case was the bullous lesions.

DR. H. J. PARKHURST, Toledo: I looked especially for the formation of blisters, because I had a case last year that showed such signs, especially on the ears, but I could find none in this case.

CASE FOR DIAGNOSIS. Presented by DR. TAUBER.

J. W., a white man, aged 45, stated that he had always been in good health until the latter part of June, 1930. At this time, he began to have diarrhea. This had persisted without remissions up to the time of presentation. No blood, mucus or pus was noticed in the stool. There were no tarry or clay-colored stools. No pain was associated with the diarrhea. The patient also had had persistent vomiting preceded by nausea, especially in the mornings. He had lost 30 pounds (13.6 Kg.) in weight and had become very weak. Two weeks previously, he had noticed a red lesion on the back of each hand between the thumb and first finger. These lesions gradually deepened in color and spread symmetrically over the backs of the hands; there was no itching or burning. Two days before admission, the same type of lesion appeared on the scrotum. For the past year, the patient had been on a diet chiefly of pastries, taking very little fruit, eggs or milk and no meat. The patient stated that lately he had become very nervous and that he suffered from loss of memory. There was also gradual loss of vision. On the dorsum of each hand there was a dusky, reddish, purple, circumscribed area of the demigauntlet variety. The inner surface of the thumb and the outer surface of the index finger were dry and scaly. These lesions were bilaterally similar. The skin on the scrotum had practically the same appearance, but there were fewer scales. Cultures from these areas were negative for tinea. The Wassermann test and other examinations of the blood gave negative results. The treatment consisted of the administration of dilute hydrochloric acid (6 drachms daily), sodium cacodylate (5 Gm. daily) and a pellagra diet—high in proteins (chiefly meat, peas, beans and vegetables) and low in carbohydrates and fat. In the course of the aforementioned treatment, the diarrhea soon began to improve, and in ten days time, the patient was having one or two normal stools daily. The lesions on the hand had disappeared in about eighteen days. The lesions on the scrotum were improving.

DISCUSSION

DR. BIDDLE, Detroit: Was it thought that the arsphenamine was of especial benefit?

DR. TAUBER: I do not believe the patient got arsphenamine.

DR. J. R. ALLISON, Columbia, S. C.: At the present time the lesions of the skin do not show evidence of pellagra. The typical lesions of pellagra on the back of the hands, the nape of the neck and the inner surfaces of the legs are not always

necessary in making a diagnosis. On the arms one can find pigmented spots which run in streaks; pellagra may occur with only diarrhea and without eruptions of the skin.

LUPUS ERYTHEMATOSIS. Presented by DR. SENOUR.

F. R., a colored man, aged 40, presented lesions over both jaws and over parts of the neck. Various patches were sharply defined against the normal skin, being dark red and covered slightly with adherent grayish scales. The central parts showed atrophic changes. There was slight infiltration and thickening. Lesions had been present for the last five years, the onset being a slight burn. During the four months previous to treatment, Feb. 1, 1929, the patient lost 20 pounds (9 Kg.). Considerable itching and pain were present. The Wassermann test gave negative results. Thirty-seven treatments with gold and sodium thiosulphate were given, one per week, varying from a dosage of 0.1 Gm. to one of 0.3 Gm. A total of 7.95 Gm. of gold and sodium thiosulphate had been given from Oct. 11, 1929 to Oct. 3, 1930. The patient had shown marked improvement with a definite decrease in the infiltration and thickening of the lesions. There had been no dissemination since the beginning of treatment.

DISCUSSION

DR. C. L. MCCARTHY, Washington, D. C.: I understand that this patient had received 8 Gm. of gold and sodium thiosulphate. I think that it would be interesting to perform some functional tests to see whether damage is being done to the liver and kidney and whether one is justified in giving so much of this drug.

DR. SENOUR, Cincinnati: At no time during the treatment did the patient have any complaints.

DR. CREGOR, Indianapolis: I think that it would be a mistake not to issue a warning of the danger of the administration of this drug. In view of the casualties in this country from the use of this drug, I think that we should sound a warning in the face of this unusual record.

DR. MORGAN, Wheeling, W. Va.: We have been using gold chloride instead of the ordinary preparation, apparently with the same results.

DR. S. GOLDBLATT, Cincinnati: Some people can tolerate tremendous quantities of arsenic, gold, mercury, etc., without a reaction, and others cannot tolerate any. This patient did have a slight reaction to this gold compound at first. I think that the fact that the patient is excreting it, shows that he can tolerate it, and therefore one is safe in giving it. In an analogous case, I have used antimony and potassium tartrate, and the patient has shown no signs of intoxication or of getting well. On the other hand, in certain patients who showed signs of intoxication early, the lesions tended to regress and the patients to recover.

DERMATITIS VENENATA. Presented by DR. TAUBER.

R. W., a boy, aged 12, was admitted to the hospital on Sept. 22, 1930, with a history of mosquito bites on the left leg two weeks prior to admission. The lesions were scratched, and a generalized vesicular eruption started three days before admission. The patient felt feverish at the onset of this eruption. There was a doubtful history of contact with poison ivy. There was no history of a previous contagious disease. On admission, there was a generalized confluent eruption of papules, vesicles and pustules, scattered over the face and extremities. There were no axillary, interdigital, plantar or palmar lesions. The condition improved under local treatment until an exacerbation on October 15, and the patient was discharged on November 1, with all of the lesions cleared. The patient was readmitted on November 17, with a more intense eruption than ever and with a history of severe itching.

DISCUSSION

DR. S. CRAWFORD, Pittsburgh: This case impressed me as being one of staphylococcic impetigo of a very superficial type rather than a dermatitis venenata.

LATE SYPHILIS OF THE SKIN — POSSIBLE MULTIPLE BENIGN CYSTIC EPITHELIOMA OF THE NOSE. Presented by DR. TAUBER.

J. C., aged 40, a colored man, presented lesions on the back, neck, thighs and right leg, which piled up on the periphery and were depressed and fibrotic in the center, with a serpiginous outline. There were no ulcerations. The lesions that had started one year previously on the upper part of the lip and nose were cystic. The lesions on the thighs had appeared as small papules about three years previously. The lesions became pustular and spread to the right leg and to the neck and arms. There was no itching. The patient had no knowledge of having had a primary syphilitic infection. The Wassermann reaction of the blood was negative. The patient had received vigorous antisyphilitic treatment, including mercury and bismuth. At the time of presentation the patient was receiving iodides.

DR. GUY, Pittsburgh: It seems to me that with reference to both the nose and the lesions on the back of the neck this is a case of tuberculosis.

DR. SHAFFER, Detroit: I wish to agree with Dr. Guy on the diagnosis. We have had many cases in Negroes in Detroit, that presented this same type of lesion.

DR. PELS, Baltimore: Has the biopsy report been read, and the tuberculin test done?

DR. TAUBER, Cincinnati: The tuberculin test was not done, but the biopsy showed tuberculosis.

PEMPHIGUS. Presented by DR. TAUBER.

C. H., a white woman, aged 50, presented bullae of varying sizes arising from apparently normal skin over the entire body and face, with a few in the mouth. On Feb. 10, 1930, the patient first noted small vesicles appearing on the skin, which itched intensely. There was slight malaise, but no loss in weight. The condition became worse until the entire body became involved. Treatment with tryparsamide was commenced on April 11, as follows: a dose of 1.5 Gm., administered twice a week for a period of two weeks; a dose of 1 Gm. administered twice a week for a period of six weeks, and a dose of 1 Gm. administered once a week for a period of four weeks. The lesions regressed, and the patient was markedly relieved from symptoms from May until July 12. At that time, a carbuncle developed. She was sent to the hospital, and on July 15, the carbuncle was opened and drained and dressings of surgical solution of chlorinated soda applied. Complete recovery occurred. Late in August, the bullae again became more numerous. Then tryparsamide, in doses of 1 Gm., one per week, and exposures to x-rays were given.

DISCUSSION

DR. L. W. SHAFFER, Detroit: This case presents a clinical picture of pemphigus. There are two groups of these cases so far as therapy is concerned. There are cases that respond to treatment and regress, and there are those which are rapidly progressive and fatal. In this instance, I think that it is a case of dermatitis herpetiformis because of the marked itching, and I think that would put it in the group with a good clinical response.

DR. SENOUR, Cincinnati: Early in this particular case, the patient showed two bullous lesions in the pharynx.

DR. SCHEAR, New York: I believe that in some cases of dermatitis herpetiformis with bullous lesions, it might be well to try the iodide test further and also the test described by Dr. Pels of Baltimore.

DR. TAUBER, Cincinnati: The blood from both of these patients has been sent to Drs. Pels and Macht. Both specimens were reported toxic, and Dr. Macht said that it was the most toxic that he had seen in his series of cases.

DR. R. C. JAMIESON, Detroit: I received the same impression that Dr. Shaffer did; namely, that a great many elements of dermatitis herpetiformis are present. It might be well to wait and see what the final outcome is. If the patient dies, the condition is pemphigus; if she lives on, it is dermatitis herpetiformis.

GRANULOMA INGUINALE—SYPHILIS OF THE CENTRAL NERVOUS SYSTEM. Presented by DR. GOLDBLATT.

I. J., a colored man, aged 28, presented lesions involving the inner surface of both thighs and the scrotum. The lesions were raised, irregular and reddish, and involved chiefly the left inguinal region and the left side of the scrotum. The center of the area was irregularly depressed. There was no characteristic discharge, but there was a characteristic odor. The Wassermann reaction of the blood had been negative on four occasions and 2 plus in March, 1930. An examination of the spinal fluid was made in October, 1930. The Wassermann reaction of the blood was 4 plus; the colloidal gold curve showed dementia paralytica, 5 cells and a heavy increase of globulin. The Kahn test gave negative results. The heart, lungs and other organs were normal. Urinalysis gave negative results. In the course of treatment, the patient had received twenty-six intravenous injections of neoarsphenamine, totaling 13 Gm.; 1,270 cc. of potassium antimony tartrate and twenty-one intramuscular injections of a 1 per cent solution of mercury bichloride. The lesion responded to treatment, but recurred on the slightest interruption. The patient had never shown signs of intolerance to antimony and potassium tartrate or neoarsphenamine.

DISCUSSION

DR. GUY, Pittsburgh: Was that case proved by finding the organism?

DR. TAUBER, Cincinnati: We have not been able to find the organism.

DR. GOLDBLATT, Cincinnati: This lesion is of ten or twelve years' duration. It has been extirpated twice. It responds to treatment and then stops. At the present time the patient has had ten or twelve weeks' treatment, but does not respond. From the history, it appeared to me to be a granuloma inguinale.

A CASE OF DIAGNOSIS. Presented by DR. TAUBER.

G. G., a white girl, aged 20, had had lesions over the body for nineteen years. On Sept. 10, 1927, she entered the General Hospital with an exfoliative dermatitis. The condition improved, and she left the hospital in December. She returned Jan. 30, 1928. On readmission, red erythematous lesions prevailed over the entire body with serpiginous raised areas of scaling dermatitis. The skin cleared under treatment with sodium thiosulphate administered intravenously and high colonic irrigations. Later the patient went to the Mayo Clinic where a biopsy was performed which showed psoriasis. She was treated there with coal tar administered locally and a milk diet. At the time of presentation, there was an exfoliation on the body. She had continued the treatment with coal tar since her return from the Mayo Clinic. During periods of exfoliation, the patient was given 3 Gm. of sodium thiosulphate every other day and high colonic irrigations of solutions of sodium bicarbonate. The condition of the skin cleared at that time, March 5. An exfoliation of the skin occurred on Aug. 30, 1929, at which time she received 10 cc. of calcium chloride urea administered intravenously — one ampule a week for ten weeks; white precipitate administered locally, and 10 grains (0.648 Gm.) of calcium lactate administered three times a day. The condition improved. Early in 1930, she visited the Mayo Clinic and was advised to use coal tar locally. The Wassermann reaction of the blood was negative.

DISCUSSION

DR. HIGHMAN, New York: This patient presents a unique picture of a scaling dermatitis of some sort. I think that I saw her some three or four years ago. At this time, I had the impression that the inflammation was one of the psoriatic types. When the skin cleared up, she had a mild ichthyotic condition, but the condition of the other half of the eyebrow and the general dryness of the skin made me conclude that whatever inflammatory process of the skin she might acquire would be modified

by the character of the skin she happens to haye. This condition does not look like a psoriasis; it is too infiltrated for parapsoriasis. It would be helpful if we could study this girl theoretically and see whether this condition is abiotrophy and generalized eczema, but modified in the clinical aspect by the ichthyotic skin. I have seen patients with ichthyiosis get eczema, which constantly recurs. We might investigate this lead along the lines that Brocq has championed. I should also like to see histologic preparations, which Dr. Tauber says have not been made. At the Mayo Clinic this condition was considered a psoriasis. I think that two other dermatologists have diagnosed it as Dercum's disease. The lesions on the back of the hand and on the eyebrow would favor a diagnosis of pityriasis rubra pilaris.

DR. L. HOLLANDER, Pittsburgh: I consider this case one of psoriasis; it is rather unusual in appearance, but I believe that there is enough evidence to substantiate this theory. A great many of the lesions are small and rounded, which is consistent with psoriasis. The patient gives a history which has some bearing on such cases. She represents the fourth generation with a scaling condition. Her father has a typical psoriasis on the elbows and knees. Her paternal grandmother, etc., has had the same sort of condition. The lesions about the knees are certainly indicative of psoriasis.

DR. S. CRAWFORD, Pittsburgh: She has the typical histologic features of psoriasis and the Monroe abscess, but I was unable to find punctate bleeding. She has a rather typical scaling lesion of the palms and a hereditary history of psoriasis.

DR. J. C. MICHAEL, Houston: I have seen cases of erythrodermie congénitale ichthyosis two or three times, and I believe that there are some features that suggest that condition. I think that it ought to be taken into consideration. It appears to me that there is an ichthyoform substratum to the whole syndrome, but of course there are certain features that make a diagnosis difficult; nevertheless, I believe it should be considered.

DR. HIGHMAN, New York: One factor that militates against psoriasis is that the scalp is free. The fact that the parents and the grandparents had an eruption speaks more in favor of an ichthyotic process. In that condition something is known about the familial tendency, whereas in psoriasis it is less and less feasible to talk about heredity. The more common the disease, the less sensible it is to talk about heredity. I think that the fact that this condition is familial is an indication that it is not psoriasis.

DR. MCCARTHY, Washington, D. C.: However, one has to take into consideration that there are newer concepts. Psoriasis is a defense reaction of a peculiar skin. If that is so, it is something inheritable. From clinical experience one finds that psoriasis runs in families, and I think that it is a point in favor of that diagnosis.

DR. JACOBS, Pittsburgh: I suggest the possibility of a hypersusceptibility to arsenic. Certainly there has been enough contact with arsenic for such a condition to develop, if there were a high susceptibility.

CASE FOR DIAGNOSIS. Presented by DR. MILLER.

In J. S., a white man, about 40 years of age, on Oct. 30, 1930, two weeks after admission to the hospital, an intense maculopapular eruption occurred, which extended from the scalp to the toes; silvery scales were present over the chest and back, and there was scaling of the face and neck. There was no pruritis or systemic reaction. When the patient was 14 years of age, he had a generalized eruption of the skin, which resembled a strawberry rash. A similar type of eruption recurred about every other year, apparently spontaneously. The eruption usually lasted from several days to a week, and desquamated freely. Former attacks were never as severe or generalized as the present eruption. The last eruption had occurred five years prior to the one shown. There was no history of a genital lesion or of asthma or eczema, familial or personal. The patient had had gonorrhea twenty-five years previously. He had received some form

of intravenous medication five years previously. No additional intravenous or intramuscular therapy had been given. The patient was admitted to the psychiatric service on October 16, with a history of occasional hallucinations and weakness of the left hand and arm. His mental condition soon cleared up. The Wassermann reaction was negative.

DISCUSSION

DR. HIGHMAN, New York: As this case was presented for diagnosis it is only fair that somebody give an opinion. I think that it is an eruption due to a drug. I do not think that we can trust the history. The history is that he came into the hospital with a psychosis.

DR. CRAWFORD, Pittsburgh: He gives a definite history of eating a tomato and then vomiting and being rendered almost unconscious. I consider the condition a toxic erythema.

TUBERCULOSIS VERRUCOSIS CUTIS. Presented by DR. CLASSEN.

In A. S., a white man, aged 38, hemorrhages began to develop in 1912. These persisted at various intervals until 1923. He had been able to work steadily until that period. Various diagnoses of chronic bronchitis, asthma and tuberculosis were made. In 1923, a cough developed and he felt fatigued frequently. These were the only symptoms that he experienced. His appetite was good, and he lost very little weight. He had no night sweats and no pleural pains. He was able to work at various light jobs from 1923 to 1925. At this time he came into the Cincinnati Tuberculosis Sanatorium, and a diagnosis of chronic fibroid, far advanced pulmonary tuberculosis, with cavitation on the left, was made. The right side was normal, except for emphysema. The patient was kept under observation until September, 1926, when it was decided to do a thoracoplasty. This operation was performed, and after that time the patient improved steadily. Examination of the sputum had given constantly negative results. He had gained weight and had been in excellent clinical condition. For the past year he had been doing light work around the hospital.

Two months before admission into the hospital, the patient was bitten by a dog, on the finger-nail of the middle digit on the right hand. This became inflamed, but cleared without treatment. In November, 1925, one month after his admission into the hospital, the patient noticed a slight inflammation and swelling around the cuticle of the same nail. The inflammation remained localized for about three months and then gradually spread, involving the middle phalanx. The finger became swollen and tender. With this increase in the process, the pus around the cuticle subsided, but soon afterward a sinus developed near the middle phalangeal joint. The pus from this was thick and yellow. Treatment consisting of hot salt compresses and zinc oxide was carried out for approximately thirteen months without marked improvement. In 1927, the patient was sent to the general hospital for treatment with light. He did not know exactly what type of treatment he received, but from his description, it appears that diathermy was given. He received four treatments. After this the finger was treated with iodine once a week, and this was applied for approximately six months. There was no definite improvement from this treatment. The lesion seemed to remain stationary. An acid-fast epididymitis developed in 1927, and according to the patient's statement, this condition followed trauma to the right testis while he was in the Sanatorium. The testis became greatly swollen and broke down. This drained for about a year, and no treatment was given except in the acute stage when local cold applications were applied. The patient had had no symptoms since the testis drained. The testis, however, was still slightly enlarged, but was gradually assuming its normal size.

For the preceding year the patient had been treated with applications of eugolol. This had been applied three times a week. Under this treatment the process had undergone marked improvement. At the time of presentation, he was free from pain and the sinus had disappeared.

DISCUSSION

DR. BIDDLE, Detroit: What is his occupation?

DR. LAVENDER, Cincinnati: Automobile mechanic.

HODGKIN'S DISEASE. Presented by DR. LAVENDER.

C. M., a colored man, aged 35, about two years previously had noted swelling of the glands on the left side of the neck. The swelling was painless. There was a gradual increase in size, which was followed by a swelling of the right side. Salves were used locally and arsenic was taken internally. During the preceding several weeks, swelling of the glands in the left inguinal region were noted. The patient had pruritis, but no purpura. For the past two or three months, there had been several macules just below the right nipple. The skin had a marked pallor. The patient was very weak; otherwise at the time of presentation there were no special complaints. The Wassermann reaction of the blood was negative. Examination of the blood showed: white cells, 20,000; red cells, 2,240,000, and hemoglobin, 40 per cent. A differential count showed: lymphocytes, 23 per cent; large mononuclears, 6 per cent; polymorphonuclears, 69 per cent; myelocytes, 1 per cent, and eosinophils, 1 per cent. The blood pressure was 112 systolic and 64 diastolic. Urinalysis gave negative results. There was generalized glandular adenopathy. In December, 1929, daily exposures to x-rays were given for two weeks. In March, 1930, five or six exposures were again given. There was a reduction in the size of the glands, and the general condition of the patient was better following these treatments. At the time of presentation, extract of liver was being given (Murphy Minot diet).

DISCUSSION

DR. MCCARTHY, Washington, D. C.: I think that after seeing this patient clinically, one could make a diagnosis of Hodgkin's disease.

LATE SYPHILIS OF THE SKIN. Presented by DR. SENOUR.

T. H., a colored man, aged 40, presented serpiginous lesions about the chin, neck and scapular regions and also on the lower part of the thorax and abdomen. Vesiculation apparently caused by a burn on the right side of the forehead and the right forearm and leg was noted. The Wassermann reaction of the blood was negative. The Wassermann test of the spinal fluid and examination of the blood gave negative results. A chronic bronchitis with emphysema was present. There were no definite localizing pulmonary or neurologic signs.

DISCUSSION

DR. J. R. DRIVER, Cleveland: That lesion does not look characteristic of syphilis. It looks more like trauma from a burn.

DR. TAUBER, Cincinnati: There is a vague history of his being burned, but his speech is so unintelligible that nothing definite is known.

DR. PARKHURST, Toledo: The outline of the lesion was indicative of a factitious lesion from a caustic application.

MILROY'S DISEASE. Presented by DR. TAUBER.

M. W., a white man, aged 22, presented an enormous edema of the ankle and leg between the knee and ankle. The edema was semisolid, cool and not tender. The measurements were: right ankle, 35 inches (88.9 cm.) and calf, 44 inches (111.7 cm.); left ankle, 34 inches (86 cm.) and calf, 46 inches (116.8 cm.). After rest in bed for four days, the measurements were: right ankle, 30 inches (76.2 cm.) and calf 40 inches (101.6 cm.); left ankle, 33 inches (83.8 cm.) and calf, 45 inches (114.3 cm.). In 1926, the patient noticed swelling of the legs. There were no associated systemic reactions. One month previously, before admis-

sion, the patient had had an acute attack, with vomiting, chill, headache and tenderness and soreness in the right leg. Two weeks before admission, the patient had had a similar attack with the same leg involved. The family history was fairly definite as far back as the grandfather, who had had swollen legs. The grandfather had married twice; the father of the patient had had acute attacks, first at the age of 14 with swelling in the right groin, malaise, chill and fever and swelling of the entire right leg which was red, tender and painful, followed by an increase in the size of the legs and desquamation after several days. The patient had had 100 or more of these attacks. The patient's father's half-sister had had more frequent and severe attacks. The Wassermann reaction of the blood was negative; the differential count was normal. The chemical analysis of the blood showed: urea nitrogen 11 mg.; sugar, 65 mg., and chlorides, 427 mg. per hundred cubic centimeters.

NEW YORK ACADEMY OF MEDICINE, SECTION OF DERMATOLOGY AND SYPHILOLOGY

A. Benson Cannon, M.D., *Secretary*

Regular Meeting, Dec. 2, 1930

Walter James Highman, M.D., *Chairman*

Erythema Multiforme Bullosum. Presented by Dr. Louis Tulipan.

J. M., a white woman, aged 55, presented an eruption of three weeks' duration on the lower extremities and especially about the ankles. It consisted of dried bullae and erythema. Scattered over the thighs and forearms were groups of pale red papules. Medicine of some kind had been taken shortly before the onset of the eruption.

DISCUSSION

Dr. Adolph Rostenberg: This is an unusual case. The fact that the localization is in one region would incline me to consider it as due to a drug. I do not think erythema multiforme would give a picture like this.

Dr. Elias Abramowitz: I think it is rather uncommon for a patient of the age of this one to develop erythema multiforme without a history of previous attacks. My impression is that the eruption is due to iodides. It is well known that the use of medicines by patients is beset with difficulties. I elicited from this patient that she had been taking a "kidney cure" for three months before the eruption appeared.

Dr. Howard Fox: I think we ought to consider erythema multiforme as a certain type of reaction, like eczema or urticaria, rather than as a definite disease. A reaction of the type of erythema multiforme may result from ingestion of drugs, as well as from various other causes.

Dr. Boleslaw Lapowski: The point brought out by Dr. Fox is important. I would limit the name of erythema multiforme to classic cases of Hebra's disease; that means, cases in which the palms and the mucous membranes are involved.

Dr. Fred Wise: I agree with Dr. Abramowitz, that this is an eruption due to ingestion of iodide.

Rhinophyma. Presented by Dr. Leo Spiegel.

M. H., a man, aged 56, born in Germany, married, a grocery clerk, said that his nose had begun to increase in size about four years prior to presentation. He had used alcohol moderately.

Examination showed an immense overgrowth of tissue, consisting of lobulated and pendulous masses, the largest the size of a walnut. There was considerable disfiguration, and the condition interfered with breathing. The nose was purple. There were numerous telangiectases, and the follicular openings were large and patulous.

The larger lesions were removed with surgical diathermy, and the remaining tissue was destroyed by desiccation. Healing took place within six weeks.

DISCUSSION

DR. JOSEPH J. ELLER: I congratulate the presenter on the fine cosmetic result he has obtained.

ALOPECIA (PITUITARY INSUFFICIENCY). Presented by DR. HERMANN FEIT.

A woman stated that she had had loss of hair from the scalp for two and a half months, and that when riding in a car she suffered from vertigo and nausea. She had severe headache. The patient was inclined to cry easily, perspired a great deal, especially on the scalp, suffered from backache and became easily fatigued. Menstruation was regular, but painful.

Examination revealed an overweight of 52 pounds (23.6 Kg.). The skin and mucous membranes were moderately pale. The sella turcica was fairly large, but normal in shape; the processus clinoideus and the base of the dorsum were normal; the outline was clear, showing no signs of erosion, irregularity or other pathologic appearance. There were no evidences of organic disease of the nerves. The urine showed no albumin, dextrose or pus. The basal metabolism was normal, being plus 7. The curve of the sugar tolerance was extremely low, 0.089 per cent concentration after one hour. The visual fields of the eyes seemed to be perfect.

The stoutness, with the typical distribution of the fat, the low blood sugar, with a very low rise after the administration of an excessive amount of sugar, with aglycosuria, the headaches and the falling hair all pointed to the participation of the anterior part of the pituitary gland. The appearance of the scalp was normal, except for a general thinning of the hair.

DISCUSSION

DR. OSCAR LEVIN: I see no reason for making a diagnosis of alopecia caused by pituitary insufficiency. The history and physical findings do not substantiate such a conclusion. This patient presented a type of alopecia that is becoming more common, that is, the type, usually seen in men, which is associated with itching, scaling, loss of hair and seborrhea. This condition in women is on the increase because, since the introduction of the hair bob, more women are going to beauty parlors, and there are having their scalps traumatized, as well as infected. Gradually a premature alopecia develops, similar to that of men.

DR. HERMAN SHARLIT: If the evidence is accepted as indicating pituitary dystrophy, there still remains the matter of establishing the relationship of the latter to alopecia. It would be far more instructive and convincing if the patient had dyspituitarism with alopecia, and if the treatment for dispituitary function reacted favorably on the alopecia.

FAVUS AND ALOPECIA AREATA. Presented by DR. HERMANN FEIT.

B. P., a woman, aged 28, born in Russia, who had been 9 years in the United States, had had an atrophic patch on the vertex since early childhood. Four weeks prior to presentation she had noticed a bald spot on the nape of the neck. While the lesion on the vertex showed atrophy and folliculitis, the lesion on the neck had all the earmarks of alopecia areata.

DISCUSSION

DR. ADOLPH ROSTENBERG: I agree with the diagnosis of alopecia areata of the neck, but I cannot agree with the diagnosis of favus.

DR. WALTER JAMES HIGHMAN: Were the organisms of favus found?

DR. HERMANN FEIT: Organisms of favus were not found.

DR. JOSEPH J. ELLER: I feel as Dr. Rostenberg does, that this is a case of alopecia areata.

DR. HOWARD FOX: I think that it is a typical fibrous nevus. The patient presents a circumscribed papillomatous area devoid of hair, which has existed since birth. Even without the conclusive history of congenital origin, I should consider this a nevus from its appearance. I see nothing whatever to suggest the crusts or scars of favus.

DR. WALTER JAMES HIGHMAN: I agree with Dr. Fox that this is a nevus. However, anything that looks like favus, and is not, deserves to have pseudopelada ruled out before a final diagnosis is reached.

SYPHILIS RESEMBLING LUPUS ERYTHEMATOSUS. Presented by DR. LOUIS CHARGIN.

E. N., aged 34, an iron-worker, had been married three years and was the father of one child aged 2. Twelve years prior to presentation he had suffered from a generalized eruption that was declared to be syphilis. He had received at the time one arsenical and two mercuric injections. Nine months prior to presentation an eruption had appeared on the bridge of the nose, which slowly spread. He had been under the care of a physician who apparently was administering injections of whole blood, to which, however, the disease did not seem to respond. At the time of presentation he showed an eruption on the nose extending over three quarters of the surface of the organ and made up of circinate lesions arranged in an irregular patch and formed by segments of circles. The center of the affected area was pigmented, but there were no patulous orifices of glands, nor was there any atrophy. On the right cheek he presented two joined circinate lesions forming the letter "S." The Wassermann reaction was three plus.

DISCUSSION

DR. FRED WISE: I believe that the lesion is one of lupus erythematosus and would be greatly interested in the microscopic observations if a biopsy is obtained.

DR. HOWARD FOX: I agree with Dr. Wise in considering this a case of lupus erythematosus, in spite of the fact that the Wassermann reaction was strongly positive. If this is a syphilitic manifestation, it is of the late nodular type. In this type there is distinct infiltration, often of a lumpy nature, well expressed by the term "fleshy lumps" used by Tilbury Fox. This was a flat, scaly eruption with very little elevation or infiltration.

DR. JOSEPH J. ELLER: I think that the facial lesions in this case are due to syphilis for the reasons expressed by the presenter. I hope that this patient will again be presented, with a microscopic study of the lesion and after a therapeutic test has been made.

DR. BOLESLAW LAPOWSKI: Before the Wassermann era, mistakes were made in distinguishing between nodular lupus erythematosus and nodular syphilids, especially when they appeared on the face. The diagnosis was established by the result of a rigorous therapeutic test. At present, with the help of the Wassermann test, we have a more substantial symptom to sustain the diagnosis, but regardless of the Wassermann reaction it is advisable to try antisyphilitic treatment before accepting the diagnosis of lupus, unless the presence of tubercle bacilli is proved microscopically.

DR. LOUIS CHARGIN: I feel that we are dealing with syphilis and not lupus erythematosus because of the circinate borders, particularly as observed in the patch on the cheek. I propose to treat the patient with bismuth and arsphenamine, and I expect a marked improvement in the process in a month or so.

ATROPHODERMA RETICULATA SYMMETRICA FACEI. Presented by DR. PAUL GROSS.

S. E. F., a white girl, aged 2½, was seen in the Skin Department of the Vanderbilt Clinic on Nov. 24, 1930. The mother said that the condition on the child's cheeks had developed shortly after birth, and that occasional lesions had developed since, which had resulted in scars. The mother described the lesions as small pimples that healed and left scars.

On examination there were numerous small pitted scars symmetrically distributed over the center of each cheek. No active lesions and no comedones could be found at the time of presentation.

DISCUSSION

DR. M. J. MORRISSEY: This is not a true case of atrophoderma reticulata symmetrica facei. The borders of the atrophic areas should be raised, representing the strands of the reticulum. It is a case of precocious acne with scarring.

DR. HERMANN FEIT: I suggest the diagnosis of nevus comedonicus.

DR. WALTER JAMES HIGHMAN: According to the history, the lesion was present shortly after birth. Theoretically, could this not be an acneiform nevus?

DR. PAUL GROSS: I brought this patient before the section in order to find what atrophoderma reticulata symmetrica is. I have never seen a case before. All of the diagnoses, including infantile acne, were considered. The absence of real comedones is against infantile acne and acneiform nevus. I showed a good example of the latter condition, with unilateral and systematized distribution, before this section. There is nothing here to suggest a papulonecrotic tuberculid. The only active lesion on the cheek of this patient is a tiny lichen pilaris-like papule.

BASAL CELL EPITHELIOMA WITHIN A SEBACEOUS CYST. Presented by DR. HENRY C. SAUNDERS.

W. E., a colored man, aged 58, presented a circular lesion on the occiput the size of a twenty-five cent piece. The lesion was elevated and crusted. A piece of tissue removed for microscopic study revealed a basal cell epithelioma within a sebaceous cyst. The lesion had been present for eight months.

DISCUSSION

DR. JOSEPH J. ELLER: Calor reported four cases of squamous cell epithelioma in a series of 100 cases of sebaceous cysts. I have never seen a basal cell epithelioma occurring in the walls of a sebaceous cyst, and I do not believe that this occurs.

DR. HERMAN GOODMAN: There was a distinct enlargement of a lymph node immediately adjacent to the sebaceous cyst. Was this considered as part of the clinical picture?

DR. PAUL GROSS: Was there any definite evidence in the histologic picture of a sebaceous cyst with epitheliomatous degeneration, and was hyaline degeneration ruled out? I have seen only one case of sebaceous cyst that on excision showed a squamous cell epithelioma. I believe that the occurrence of basal cell epithelioma is rather rare.

DR. WALTER JAMES HIGHMAN: The wall of the cyst was found at the site of the basal cell growth. This was not a cylindroma, but was more massive.

DR. HOWARD FOX: I think this is an interesting case, as apparently the patient is a full-blooded Negro. Epithelioma of the skin of full-blooded persons of this race is exceedingly rare. I never saw a case of the kind in a long experience at the Harlem Hospital. This case is somewhat different, as the lesion has developed in a sebaceous cyst.

DR. ELIAS ABRAMOWITZ: Sebacious cysts, often clinically diagnosed as such, give us the surprise of our lives when examined microscopically. I recently had occasion to see one located on the scalp and supposed to be a sebacious cyst, that turned out to be, on pathologic examination, aberrant thyroid tissue. Perhaps the clinical examination of these lesions is done too perfunctorily. It should be emphasized that sebaceous cysts are freely movable over the underlying parts, are soft, and vary in size from time to time.

MULTIPLE EPITHELIOMATOSIS. Presented by DR. PAUL GROSS.

M. A. H., a white woman, aged 48, married, had had an eruption on the face and body for the past thirty-five years. The patient stated that at the age of 11, she had had a generalized eruption of the skin, which cleared up in a few weeks, but recurred. She had also been treated with Fowler's solution for a long time. Some of the lesions had been present for more than twenty years. Five years previous to presentation several biopsies had been performed, and the lesion on the back had been treated with x-rays and radium.

Examination showed three lesions on the face: one on the right temple and two on the right side of the forehead, considerably changed by treatment. In the midscapular region there were atrophy and formation of scars following treatment. On the body were two types of lesions: the first was a yellowish, slightly elevated tumor of waxy appearance, the size of a small bean, and, the second was a larger, flat, reddish, slightly scaly patch, with distinct atrophy and with a fine, threadlike, pearly ridge at the border. The history suggested that arsenic taken for the cutaneous eruption in childhood might have been the etiologic factor. There were no other evidences of arsenical sequelae.

Biopsy showed some atrophy of the epithelium. There was transparency of some of the cells of the epithelium. There were several nests of basal cells projecting into the corium, which had broad attachments to the epidermis. One was adjacent to what apparently was a coil gland; another, to what apparently was a follicle. The relationship of the third was rather difficult to ascertain. The cells had little cytoplasm. The nuclei were rather prominent, some pyknotic and some vesicular. The peripheral cells were arranged in the formation of a palisade. The cell masses were shrunken away from the corium, which was highly cellular, showing fibroblasts, polymorphonuclears, and an increase in the number of blood vessels, and was markedly edematous.

DISCUSSION

DR. EUGENE TRAUB: There is no question about the diagnosis. I do not believe that the arsenic necessarily had anything to do with this case. I have a number of patients with the same type of lesions, from whom I have not been able to obtain a history of treatment with arsenic.

DR. BOLESLAW LAPOWSKI: There are two kinds of lesions: lupus vulgaris and epithelioma on lupus. On the right side of the ear, the tiny papule is lupus vulgaris; on the abdomen the lesions are miliary lupus.

DR. ELIAS ABRAMOWITZ: This patient presents what I believe to be multiple superficial epitheliomas. Arsenic has nothing to do with the lesions of the skin of this patient, for arsenic first causes keratoses which then become malignant. There are no keratoses to be seen in this patient in the usual locations where they occur after the use of arsenic (hands, feet or genitals), and there are no signs of them where the lesions of the skin are located.

DR. HOWARD FOX: From the age of the patient and the duration of the disease, the diagnosis of epithelioma is suggested. The lesions on the forehead are covered with crusts, and it is consequently hard to see definite borders. One lesion on the arm, however, has a superficial, pearly, slightly elevated border that makes it a classic superficial epithelioma.

DR. HERMAN GOODMAN: The type of superficial epithelioma following long standing lupus vulgaris is the squamous cell, and not the basal cell type. This patient has the flat, superficial epithelioma of Paget. We have seen patients with basal cell epithelioma on one part of the cutaneous surface, and squamous cell epithelioma on another part. Also Dr. Jessup has described both types of tissue in one growth.

DR. WALTER JAMES HIGHMAN: The mixed type in different lesions in the same patient is not news any more.

DR. PAUL GROSS: This is a typical case of multiple superficial epithelioma known especially from the description by Graham Little. Dr. Wise several years ago called our attention to this condition and its differential diagnosis. May I mention the fact, which is not so well known, that Janeway of this city as far back as 1910 gave a perfect clinical and histologic description of this type of basal cell epithelioma.

This patient shows the different stages, from the small, waxy nodule to the flat, reddish, scaly and atrophic lesions. Probably the small remaining nests of epithelioma in the atrophic center suggested to Dr. Lapowski the diagnosis of lupus vulgaris. The development of basal cell epithelioma in lupus vulgaris is rather unusual. I have never seen it.

As regards the etiologic relation to arsenic, I was obliged to consider such a possibility, in view of the history. I have no intention of calling these lesions arsenical cancer, for, besides the clinical picture, we have the typical histology of basal cell epithelioma.

PERIFOLLICULITIS ABSCEDENS ET SUFFODIENS (GENERALIZED). Presented by DR. OSCAR LEVIN.

A. S., aged 39, single, a native of Hungary, a fur salesman, had been admitted to Beth Israel Hospital in October, 1930, complaining of a generalized eruption of boils and abscesses. The condition had been present for twenty years. The patient had received various forms of treatment, without effect. The past history and family history bore no relationship to the complaint.

At the time of examination, the patient was pale, and could not sit, and even had difficulty in lying in bed because of the swelling and pain of the buttocks. Scattered all over the body were numerous comedones, small and large, inflammatory, indurated, some of them unbroken, others ruptured and discharging pus. Interspersed were numerous flat and elevated, irregular, hyperthrophic scars. These scars varied in size from that of a nickel to that of a half-dollar, and in places they were aggregated to form large, hypertrophic masses. In some places the old scars were inflammed and discharging pus, and some were covered with crusts. The scalp, besides showing premature alopecia, showed areas of hypertrophic, irregular, scarred lesions, resulting in cicatricial baldness. Both buttocks were covered with enormous, cauliflower-shaped, inflamed, swollen masses. Besides the main large masses there were also smaller purulent ones. There was a great deal of undermining of the tissues. There was also the formation of sinuses, and from some of these pus was being discharged. The inguinal glands were much enlarged.

Cultures on Sabouraud's medium were negative for fungi.

The results of examinations for tubercle bacilli and sporothrix were negative. Bacteriologic examination revealed staphylococci. Sigmoidoscopic examination revealed a normal rectum and sigmoid. Roentgen examination revealed no evidence of changes in the vertebrae. The lungs were clear, and there were no signs of tuberculosis or pleural changes. The urine showed a trace of albumin and occasionally a granular cast, but otherwise was normal. The hemoglobin was 50 per

cent. The red blood cell count showed 3,500,000; the white blood cell count was 10,000, and there were 79 per cent polymorphonuclear leukocytes. The Wassermann reaction was negative, and the blood chemistry was normal. The von Pirquet test gave a negative result. Basal metabolism was plus 15. The feces showed no ova.

Tissues taken from the scalp, back and lesions on the buttocks showed a chronic inflammatory process with foreign body giant cells surrounding fatty acid crystals. There was hyperkeratosis of the follicles. Essentially, the pathologic sections showed an infiltration of the deep cutis by inflammation, showing cells of various types, such as polymorphonuclear leukocytes, plasma cells and numerous giant cells.

The patient's temperature was always normal; the pulse rate, from 80 to 90, and the respiration rate, 24.

DISCUSSION

DR. PAUL GROSS: May I ask Dr. Levin whether the Frei test was done in this case? The chronic elephantiasis could be an unusual sequela of an old lymphogranuloma inguinale.

DR. WALTER JAMES HIGHMAN: I think the name is absurd. This disease is due to a peculiar lack of resistance to the ordinary staphylococcus. I do not see why it cannot be called multiple staphylogenic abscesses of the skin with the usual manifestations of burrowing or undermining, uncontrolled by specific resistance. I do not see why such an extravagant name as this needs to be given to a disease. Perifolliculitis—there is no sign of it! It is far beyond this stage. The patient has multiple abscesses. If he happens to have elephantiasis also, it is because the lymphatic circulation has been cut off.

DR. OSCAR LEVIN: When the patient was first admitted, about two months prior to presentation, acne conglobata was diagnosed. The patient had an eruption as described in the presentation. Various conditions like tuberculosis and sporotrichosis had to be excluded. We regarded it as a staphylococcal infection. The lesions of the scalp were similar to those usually seen in perifolliculitis capitis abscedens et suffodiens. The generalized lesions were those of perifolliculitis with marked scarring. I believe that acne conglobata and this condition, perifolliculitis with its adjectives, belong to the same group. Cases of generalized perifolliculitis abscedens et suffodiens have been described in the literature. Another unique feature is the condition of the buttocks. The marked tumefaction is probably the result of lymphatic stasis from the staphylococcal infection.

While in the hospital the patient improved very much. Treatment consisted of rest in bed, the use of a nourishing diet of high protein content and plenty of liver, general tonic measures, potassium permanganate baths twice daily, applications of ultraviolet rays and the intravenous use of hydrochloric acid, in dilution of 1 : 1,500.

I am of the opinion that the long name given to this condition is unnecessary.

DR. HOWARD FOX: An excellent description of acne conglobata with a review of the subject was recently presented before the American Dermatological Association by Dr. Michelson. Those who read this article, will, I think, agree that the present case belongs in this group of cases.

TUBERCULID-LIKE ERUPTION FOLLOWING USE OF TUBERCULIN. Presented by DR. HERMAN SHARLIT.

M. W., had been presented at the meeting of the section on Nov. 4, 1930, as showing tuberculids (in the etiologic sense) following application of tuberculin (von Pirquet's test). Since the last presentation the patient had been observed twice weekly. The papular eruption seen at the last presentation had slowly resolved, leaving pigmentation and scars.

On Nov. 17, another von Pirquet test was done, resulting almost instantaneously in a wheal that in seven minutes was surrounded by an erythema 4 inches

(10.16 cm.) in diameter (probably a reaction to protein). On November 24, a new crop of papules appeared on the trunk. These were pinpoint-sized to pea-sized with depressed centers and deep red, circumscribed zones. No itching or burning accompanied the eruption.

Biopsy showed dyskeratotic papules with slight subepithelial infiltration. A second biopsy showed an inflammatory lesion, replete with epithelioid cells and suggesting early tuberculid.

DISCUSSION

DR. JOSEPH J. ELLER: I think this is an allergic reaction associated with a tuberculous focus in the patient. The reaction definitely followed injection of tuberculin on two different occasions. Stokes, in 1919, mentioned a reaction of the skin following the use of tuberculin ointment in a patient with visceral tuberculosis. The lesions that this patient presented at the last meeting certainly looked like papulonecrotic tuberculid.

DR. HERMAN SHARLIT: Dr. Highman studied sections from both biopsies. He considered the first a "toxic inflammation," and the second he described as an "inflammatory lesion, replete with epithelioid cells, suggestive of early tuberculid."

DR. PAUL GROSS: A new outbreak of lesions one week after the second injection of tuberculin does not speak against parapsoriasis varioliformis. The eruption in the acute cases of this disease appears in several attacks.

As far as the histologic slides are concerned, Dr. Wise says the first section conformed very well with parapsoriasis. The second section showed nothing more than an infiltration of the cutis and leukocytes invading the epidermis. I suggest cutting some more sections, as I do not think that the section shown is near enough to the center of the lesion.

Dr. Eller quoted an article by Stokes, who observed the development of papulonecrotic tuberculid-like eruptions after applications of tuberculin in patients with tuberculosis of the skin. I can only repeat again that I have never seen the development of tuberculids after injections of tuberculin in patients without tuberculosis of the skin.

DR. HOWARD FOX: Dr. Sharlit has produced a second eruption by repeating the injection of tuberculin, and it seems reasonable to suppose that this is an allergic manifestation due to this injection. The type of disease described as parapsoriasis varioliformis is self-limited. I would therefore suggest that at a later date, perhaps in three months, the injection be repeated. If the process again flares up, it would appear to be definitely due to the tuberculin.

DR. FRED WISE: Although the name that I proposed, "parapsoriasis varioliformis," might be a misnomer, it is nevertheless a fact that microscopic sections of dry lesions examined in cases of that disease are identical with those found in pityriasis lichenoides chronica of Juliusberg or in parapsoriasis guttata. In Dr. Sharlitt's case the section that I examined seemed to me to be indistinguishable, in its microscopic changes, from sections of typical parapsoriasis guttas. It is possible that parapsoriasis, after a period of subsidence, might flare up again after an injection of tuberculin. It would be of great interest to reexamine Dr. Sharlit's patient and note the changes following an injection of tuberculin, and to note whether new lesions appear, or whether old ones flare up as a result of the injection.

DR. PAUL GROSS: Two of my three patients with parapsoriasis varioliformis were tested with tuberculin. The first one had a positive local reaction and the second one a very marked local, and a severe general, reaction. A great number of strong positive reactions to tuberculin have been reported in cases of parapsoriasis varioliformis and also in chronic parapsoriasis. No conclusions could be drawn from these findings.

DR. EDWARD R. MALONEY: This eruption should not be called a tuberculid; it is a tuberculid-like eruption. It seems to me we have rather a simple case, a toxic reaction to a definite substance. It is not necessary to try to tie this up with parapsoriasis of any type.

DR. HERMANN FEIT: I should like to ask the chairman to call on Dr. Peck, who has seen tuberculid-like eruptions following the injection of tuberculin. I believe this is a tuberculid-like eruption following the injection of tuberculin. I cannot understand a diagnosis of parapsoriasis being considered.

DR. S. L. PECK: I think that a positive reaction to tuberculin would not help us in making a diagnosis in this case, because statistical data show that 95 per cent of all persons show a positive reaction to tuberculin. However, a so-called reaction is of great help. Here, we are not dealing with a real focal reaction, but with recurrent eruptions, following injections of tuberculin. From the present understanding of lesions appearing after injections of tuberculin and trichophytin, they are accepted as forms of trichophytid or of tuberculid. It must be borne in mind that the eruption in this case may have nothing to do with tuberculin; it may be due to something in the medium. A control with injection of the medium without the active principle of tuberculin must be made to rule out this possibility.

DR. SIGMUND POLLITZER: Parapsoriasis is a badly chosen name. The term, if it means anything, connotes a relationship to psoriasis, a concept for which there is not the slightest foundation. In the second place, I question whether there is justification for grouping together the three diseases that Brocq, with his passion for classification, assembled under the name of parapsoriasis, diseases, between which, in my opinion, there are more differences than resemblances.

Parakeratosis variegata is an extremely rare disease. It is characterized by the occurrence of lichenoid papules that form an extensive, shining network inclosing small areas of normal skin and, by an extraordinary stability—once established, it undergoes little or no change either spontaneously or under treatment. These features alone, it seems to me, suffice to distinguish it from the Juliusberg-Jadassohn disease that has been well named pityriasis lichenoides. Here we have a disease that is markedly inflammatory, the process going on at times to the formation of vesicles, serous crusts and even necrotic lesions. We are ignorant of its causation, but it is worth considering that so excellent an observer as Civatte thought the disease bore an etiologic relationship to tuberculosis. No such etiologic element has been suspected for parakeratosis variegata or for Brocq's scaling erythroderma in patches. I agree wholly with Juliusberg, who maintained that only by the proof of a common cause for these diseases can their common nature be accepted. Meanwhile I am emphatically of the opinion that the term parapsoriasis should be dropped from the nomenclature, and that it would be advantageous in the present state of knowledge to revert to the original name of parakeratosis variegata for the Unna-Santi-Pollitzer disease, pityriasis lichenoides for the Juliusberg-Jadassohn disease and erythroderma pityroides disseminatum for the Brocq disease.

To return to the case presented this evening which has been diagnosed by some as parapsoriasis varioliformis, some dozen or more reports of cases have appeared in the literature under this or a similar name. The cases are described as presenting small, scaling papules and patches, with vesicular lesions that become necrotic and heal with formation of scars. A considerable number of the patients give a positive reaction to tuberculin. On two separate occasions in the case before us an injection of tuberculin provoked an eruption of vesicular lesions. Does not this reaction go far toward showing that the dermatosis is a tuberculid? I would remind you that Jadassohn himself expressed the view that all the lesions of pityriasis lichenoides could be produced by the tubercle bacillus. From this point of view the case before us is of extraordinary interest and may well serve to shed light on the etiology of pityriasis lichenoides and to clear up the significance of its varicelliform variant. I would suggest that another injection of tuberculin be given, a fresh lesion excised for innoculation into an animal and after a few weeks the remains of another vesicular lesion be excised for histologic study.

DR. WALTER JAMES HIGHMAN: This discussion shows the peculiar credulity that the American reading public displays toward dermatology as foisted on us from abroad. Parapsoriasis, as I understand it, presents a definite picture. I think it was an unfortunate choice on the part of Altmann and Mucha to select the

term parapsoriasis varioliformis for the picture called by that name. In any event, the particular case that we are discussing looks neither like parapsoriasis nor like small pox. What to call this condition I do not know. From the findings in, and the appearance of, the lesions in this boy it looks to me as though he has a papulovesicular toxic eruption. It certainly does not look like papulonecrotic tuberculid. Nor do I believe Dr. Sharlit meant it to be considered that. His idea seems to me to be that an injection of tuberculin provoked an eruption that might be tuberculous in origin or that might be toxic, due to the excipient in which tuberculin is made; that is, either an atypical reaction to tuberculin or a toxic eruption. To call parapsoriasis a response that would be tuberculous, in the toxic sense, or an allergic reaction to a protein, is absurd. It seems less artificial to assume that Dr. Sharlit's hypothesis is the explanation than to assume that lesions obviously not resembling parapsoriasis or variola are nevertheless parapsoriasis varioliformis. This would be forcing the issue. As a matter of fact, the specimen studied was three days old when excised. No one said it looked like a papulonecrotic tuberculid. The histologic report was to the effect that the number of epithelioid cells present suggested, in this acutely developing lesion, a possible tuberculous nature, but predicated no certainly of its being tuberculous. Certainly there was no implication that parapsoriasis varioliformis was related to the tubercle bacillus.

The evidence seems in favor of the assumption that this is a toxic reaction to tuberculin and not parapsoriasis varioliformis—whatever that may be. I for one do not swallow this European concept, hook, line and sinker, because I am never hypnotized by the exotic, as such. Whatever Altmann's disease is, this is not a case of it.

DR. HERMAN SHARLIT: In brief, Mr. Chairman, my thoughts on this case are these: A youth presented himself with a papular eruption said to have appeared five days after the application of tuberculin (von Pirquet's) test. The natural tendency was to see in this application of tuberculin the cause of the eruption. I presented this patient, therefore, as one evidencing tuberculids in the etiologic sense, after the fashion of calling an eruption following the use of trichophytin tricophytids. I never suggested that these lesions were papulonecrotic tuberculids. Those who see in this patient's condition that variation of parapsoriasis known here as parapsoriasis varioliformis, persist in ignoring the fact that the boy's first eruption followed the application of tuberculin and ignoring further the fact that one month later a second crop of papules was again elicited by a second application of tuberculin.

If the case is a form of parapsoriasis, its protagonists should be inclined to admit, I think, that the protein mixture designated as tuberculin seemed able to evoke the eruption in this patient. Dr. Peck's suggestion that we may here be dealing with a toxic reaction to the beef broth protein contained in the tuberculin mixture is well taken. We had intended to test the influence of glycerinized broth as a control in this patient. But whether it is caused by broth or tuberculin, we feel strongly inclined to the position that the eruption is a toxic reaction to what is contained in the tuberculin mixture.

DERMATITIS FOLLOWING ADMINISTRATION OF GOLD. Presented by DR. DAVID BLOOM.

J. P., an Italian woman, aged 48, had been treated for lupus vulgaris with gold sodium thiosulphate. After nine weekly injections of from 25 to 100 mg., dermatitis of the thighs and forearms, associated with general pruritis had developed on July 2, 1930. Soon, however, severe dermatitis involved the trunk and the extremities making the patient extremely uncomfortable, because of the pruritus. After several weeks the red color of the affected skin gave place to a bronze color that lightened up gradually to the light brown discoloration seen on presentation.

Biopsy of the pigmented skin showed a very small amount of pigment in the basal cell area and numerous chromatophores and masses of coarse pigment in the papillary and subpapillary layers of the corium.

DERMATOPHYTOSIS AND LYMPHANGITIS. Presented by DR. HERMANN FEIT.

R. D., a man, aged 30, had had an eruption on the left leg for twelve years. He had lived in Porto Rico until the age of 10. Twelve years prior to the presentation he had had a fever; the left leg had become swollen, red, hot and painful. The leg had never returned to normal size. Since then he had had attacks every two or three months, the leg swelling with each attack. Each acute attack lasted about two weeks. With each attack the inguinal glands on the left side became swollen and tender.

The left leg was uniformly swollen below the knee; it was not tender, and the skin was thick and scaly. There were no vesicles or papules to be seen. The thigh had not become involved. The right leg was normal. The inguinal glands on the left were palpable. The epithelium between the toes and feet was sodden, macerated and scaly.

At the Lenox Hill Hospital, in 1923, hourly examinations of the blood were reported as negative for filaria.

Examinations of the blood on Nov. 25, 1930, at 10, 11 and 12 p. m., were reported negative for filaria. The stools were negative for ova and parasites. The result of an examination of the feet for tinea was positive.

PHILADELPHIA DERMATOLOGICAL SOCIETY

J. P. GUEQUIERRE, M.D., *Secretary*

Regular Meeting, Dec. 5, 1930

C. S. WRIGHT, M.D., *Presiding*

PITYRIASIS ROSEA. Presented by DR. J. M. SCHILDKRAUT.

A. E., a dentist, aged 30, presented an extensive eruption that extended from the neck to the calves of the legs and that had begun fourteen days previously. On the chest and abdomen the eruption was red, diffuse and scaly; on the arms, back and limbs there were oval, discrete and slightly scaly lesions. On the limbs and the back the appearance of the condition was that of pityriasis, but on the neck it looked as if a dermatitis was superimposed. The patient used Life Buoy soap and a lotion of calamine; I do not know whether the phenol produced the eruption. The Wassermann reaction was negative; there were no lesions of the mucous membrane; the lesions were salmon-colored and scaly. The patient also had seborrhea, which was noticeable in the scalp and around the eyes.

DISCUSSION

DR. J. P. GUEQUIERRE: I should make a diagnosis of pityriasis rosea.

DR. E. F. CORSON: I think that the condition is dermatitis, probably succeeding and overlying a case of pityriasis rosea.

DR. JAY F. SCHAMBERG: I agree with the diagnosis of pityriasis rosea with superimposed dermatitis doubtless due to washing with the carbolized soap. On the lateral surface of the chest are long, linear lesions typical of pityriasis rosea. This case illustrates how much resemblance there may be at times between pityriasis and dermatitis seborrheica.

HODGKIN'S DISEASE COMPLICATED BY LICHEN PLANUS. Presented by DR. F. D. WEIDMAN.

W. W., a white man, aged 41, who had been presented previously before the society (ARCH. DERMAT. & SYPH. **2**:739 [Oct.] 1930) was presented the second

time for the following reasons: 1. A second operation had supplied material which, on injection into animals (guinea-pigs and pigeons), had assisted in removing the possibility of tuberculosis as a factor in the case. Furthermore, the questionable report of finding tubercle bacilli in this patient had been investigated and found erroneous. 2. Hemolytic staphylococci were secured in pure culture from the surgically excised lymph nodes. 3. Coincidentally with a sudden exacerbation in the inguinal lymph node, an acute case of lichen planus had developed over the arms and abdomen and was now presented for observation. Finally, attention was called to the presence of the intensely pruritic papules, more particularly in the black portions of the tattoo mark than elsewhere in the same region. Histologic examination of sections did not reveal the lichen planus in these papules, but at the time the biopsy was performed the papules were not typical of lichen planus clinically.

A week before presentation, Dr. Weidman had seen two other cases of acute lichen planus in patients bedfast on account of internal medical conditions. Thus, in a woman with acute articular rheumatism a dermatosis developed coincidentally with the outbreak, but it had almost entirely regressed as the rheumatism improved (over a period of about two weeks). The other patient had gastric symptoms, presumably ulcer; the dermatosis had been present for eight or nine weeks.

The presenter inclined strongly to the idea that lichen planus was not an etiologic entity and pathologically was of the order of the "ids."

DISCUSSION

DR. S. S. GREENBAUM: I should like to offer the possible diagnosis here of leukemid.

DR. J. F. SCHAMBERG: I am glad to have seen this interesting case presented by Dr. Weidman. At the present time I do not see any characteristic lesions of lichen planus. The patient has lichenoid lesions much eczematized on the legs, but I should not be satisfied to call the condition lichen planus at this time. Nothing sufficiently characteristic of the true lichen planus papule is present.

DR. F. D. WEIDMAN: Sections from the lymph nodes showed Hodgkin's disease; leukemia was out of the question.

PSORIASIS. Presented by DR. ROBERT L. GILMAN.

A colored woman, aged 25, who since September 1 had had an eruption on the body which became generalized, was admitted to the hospital on October 1, and apparently a diagnosis of syphilis was made on clinical grounds only. She was given an injection of neoarsphenamine. The Wassermann reaction proved to be negative on October 15, and it was again negative a few days before presentation. Following the first injection of neoarsphenamine, she received three injections of bismuth. On October 23, a second injection of neoarsphenamine was given. At that time involution of the eruption was noted. The diagnosis was held in abeyance as the eruption resembled a syphilid—an annular and indurated type of eruption. (A section from biopsy was exhibited.)

DISCUSSION

DR. F. D. WEIDMAN: I have been following this case with Dr. Gilman. We recognized the psoriasiform character of the eruption, but the final diagnosis was postponed for a long period. The factors that caused us to delay were that the central parts of so many of these lesions were depressed and that the peripheral parts took on a beaded appearance. In the axillae the central parts showed pigmentation; even making allowance for the fact that the patient is a pronounced brunette, there was a residual pigmentation. We concluded that the condition was psoriasis only after the biopsy did not in the slightest degree support the idea that a syphilitic infection could be present. The changes around the blood vessels were

preeminently epidermal and not particularly infiltrative. I do not know whether or not this patient can be called a full-blooded Negress, but she is rather dark skinned.

DR. JAY F. SCHAMBERG: I agree with the diagnosis of psoriasis, although psoriasis is extremely rare in colored people. I think that among 1,500 cases of psoriasis that I have seen, there have been only three or four in Negroes. I distinctly recall that a number of years ago, before any of those present were members of this society, I presented a man who had a remarkable psoriasiform eruption on the back, and two distinguished professors of dermatology said "What a perfect psoriasis." I then showed the front of the patient, who had an annulare syphilid on the face. This case illustrates the strong imitation of syphilis. But in the case presented tonight I think that the lesions are characteristic of psoriasis.

OSTEOMYELITIS OF POSSIBLE SYPHILITIC ORIGIN. Presented by DR. ROBERT GILMAN.

A boy, aged 13, had had a chronic disease of the bone for five years with several operations. (A typical roentgenogram of the extremities was shown on the screen.) Serologic tests gave negative results. A white cell count was 19,000, and acid-fast bacilli had not been demonstrated in the sputum. The patient was shown because of the interesting observations in the roentgenograms. A chronic pyogenic type of osteomyelitis was present; the lesions of the skin on the extremities and the face resembled frank scrofuloderma in tuberculosis of the bones. It was a case in which the lesions of the skin seemed to mimic infection with acid-fast bacilli. I do not believe that this patient had either syphilis or tuberculosis.

DISCUSSION

DR. F. D. WEIDMAN: I think that the point in showing this patient is in connection with the roentgenograms. Dermatologically, the case is not important. Around the sinuses there is hyperpigmentation, but there is comparatively little infiltration as compared with most cases of tuberculosis of the skin. My main interest was whether the roentgen examination would be of assistance in making a differential diagnosis, but the reports from the roentgen laboratory have not been illuminating. In the first series of roentgenograms it was stated that the condition was probably not tuberculosis, as the changes were greatly proliferative, whereas it is known that tuberculosis is destructive. The second series of roentgenograms showed condensation of the bone in the tibia, and the report came back "possibly syphilitic."

For a number of years during my undergraduate course, I had occasion to demonstrate actual specimens of bone in various diseases, and I recall that those furnished me as specimens of osteomyelitis showed condensation of the osseous tissue and that the thickening, such as is shown in the second series of roentgenograms, would be compatible with what is shown in those morbid specimens. My feeling is that at first these multiple sinuses might appear to the dermatologist to be expressions of scrofuloderma, although organisms other than the tubercle bacillus might be concerned. That fact was further brought home to me during a visit to the coast. In a colored man with coccidioidal granuloma there was no dermatitis. There were ten or twelve discharging sinuses and veritable lakes of pus in the subcutaneous tissue, and on opening the body at necropsy it was found that these subcutaneous lakes communicated with liquefied bone, and the changes there were like those seen in tuberculosis. I think that one ought to realize that probably there are numerous other causes of scrofuloderma-like changes on the skin beside tuberculosis.

DR. JAY F. SCHAMBERG: I must confess that the impression I get from looking at the cutaneous lesions is that they are tuberculous. If there were only the lesions on the thigh and the side where an osteomyelitis exists, one might say that they were solely due to the pouring out of some exudate from the involved bone; but the boy has two lesions on the face, where there is no osteomyelitis, and they must be accounted for. Furthermore, one of the lesions on the side of

the neck is distinctly bluish, with an ulceration of the central surface, very suggestive of tuberculosis of the skin. It is possible, of course, that a pyogenic osteomyelitis is associated with a Koch infection of the skin, and it is possible that the osteomyelitis is of tuberculous nature. I think that the excision of one of the more characteristic lesions on the skin and inoculation into a guinea-pig might throw further light on the subject.

A CASE FOR DIAGNOSIS. Presented by DR. E. F. CORSON.

In a boy, 4 years of age, brownish spots had begun to appear on the neck more than a year prior to presentation. They gradually spread over the trunk, and they recently appeared on the face and the upper portion of the extremities. There was no history or appearance of urticaria, and none of the spots could be activated into wheals by rubbing. The lesions were uniformly pigmentary with no elevation or multiformity whatever. The patient had no subjective symptoms. Permission for biopsy was not given.

DISCUSSION

DR. M. BROWN: This boy resembles a patient presented here four or five years ago with a case diagnosed as von Recklinghausen's disease in the macular stage.

GRANULOMA ANNULARE PRESENTED FOR THERAPEUTIC SUGGESTIONS. Presented by DR. V. GARNER.

The boy, 3 years of age, had first been seen in August when he presented a solitary infiltrated plaquelike lesion over the dorsal aspect of the left foot. On stretching, the lesion presented a translucent appearance. Five roentgen treatments of one-half skin unit each were given. The lesion spread peripherally during this time.

DISCUSSION

DR. F. D. WEIDMAN: I prefer to have this lesion excised; then any doubt as to diagnosis can be settled.

DR. ROBERT GILMAN: Last spring I showed a girl 16 years of age with a lesion of about this size and duration, and I had given her roentgen treatment for about the same length of time. Finally, I referred her to Dr. Pendergrass for treatment with radium. Since then, she has been under observation and has made a fairly good recovery.

DR. C. S. WRIGHT: Dr. Schamberg and I had a case of a boy who had a lesion on the knuckle that was excised by a surgeon, but it recurred. Under treatment with filtered radium, he made complete recovery.

DR. V. GARNER: What alternative diagnosis is there?

DR. F. D. WEIDMAN: I thought immediately of erythema elevatum diutinum. The infiltration is very dense, and the knuckle and finger are conspicuous places for this disease.

PREMYCOTIC STAGE OF MYCOSIS FUNGOIDES. Presented by DR. D. M. PILLSBURY for DR. JOHN H. STOKES.

J. H., a man, aged 30, presented several patches of scaly erythema over the trunk, the arms and the legs and a patch of alopecia on the front part of the scalp and nape of the neck. The eruption was of nine years' duration; the original lesion had occurred over the anterior surface of the left thigh, and more patches had appeared subsequently. The pruritus became more and more severe. Many of the lesions showed a tendency to pyogenic infection and folliculitis. The small granulomatous lesion over the left thigh was pyogenic rather than fungating. The diagnosis was provisional.

DISCUSSION

DR. M. BROWN: The eruption has all the earmarks of the premycotic stage of mycosis fungoides.

DR. PATRICIA DRANT: I agree with that diagnosis.

DR. JAY F. SCHAMBERG: I believe that the diagnosis is a reasonable one. I do not want to deny that this condition might eventuate in mycosis fungoides, but at the same time I do not want to make a definite diagnosis of mycosis fungoides. Time will have to make the diagnosis. Mycosis fungoides often supervenes where it is not expected and often does not occur where it is expected. I think that the guarded diagnosis made by the presenter is correct.

ERYSIPELOID. Presented by DR. V. GARNER.

A man, aged 40, in August, 1930, had pricked the index finger of the right hand on the tooth of a fish head used as bait for crabbing. Two days later the finger had become swollen, red and painful. At the site of the injury a vesicle formed which was opened. Bloody serum was evacuated, and there was no pus; the wound healed in three weeks. The redness progressed, involving the dorsum of the hand and eventually all of the fingers and the palm. Still later, lesions appeared on the forearm and above the elbow. The involved areas would gradually disappear, but erythematous patches would reappear at other areas. In this way the process has continued to the present, about fourteen weeks since its initial appearance. The patient complains of a burning, pricking sensation, a sense of stiffness of the fingers, an inability to grasp objects firmly and tenderness and moderate pain centered around the olecranon process and in the wrist. The disease has persisted despite treatment with x-rays, ultraviolet rays and a variety of antiseptics employed as compresses. Serpiginous purplish-red areas were seen irregularly distributed on the right forearm and on the lower third of the arm.

DR. J. V. KLAUDER: Dr. Garner has kindly allowed me to treat the patient with immune serum and to remove a piece of skin in order to obtain the organism to study its virulence. The piece of skin is being cultivated. I believe that the organism concerned here is a virulent one. There are a number of unusual features: the formation of a vesicle at the site of injury, the involvement of the palm, the extension above the wrist and above the elbow, the long duration of the process by recurrences and the pain and tenderness involving the joints. These symptoms are uncommon in the usual run of cases of erysipeloid that are seen in the clinics, which are usually of a mild character. These symptoms were more common in the severe type of erysipeloid that Righter, Harkins and I studied in fishermen and from which we isolated a virulent organism. The clinical picture of erysipeloid can usually be correlated with the virulence of the organism, which in turn can be correlated with the source of infection.

An injection of 25 cc. of the immune serum was administered intramuscularly. This resulted in an improvement that was only temporary. I now propose to inject the serum locally and to give an injection of about 100 cc. intramuscularly.

DR. V. GARNER: The x-rays, the Alpine lamp and potassium permanganate have been used.

DR. J. F. SCHAMBERG: Because of the influence of the x-rays in the treatment for erysipelas it might be useful here.

PEMPHIGUS OF THE EYE: ESSENTIAL SHRINKAGE OF THE CONJUNCTIVA, KRIES (1878), VON GRAEFE (1879). Presented by DR. J. V. KLAUDER.

A woman, aged 69, born in Germany, from the clinic of dermatology and syphilology at Wills Hospital, presented a condition of fifteen years' duration. The conjunctiva of the left eye was shriveled and adherent to the cornea; obliteration of the conjunctival sac was noted. The cornea was opaque, and movement of the eyeball was limited. The right eye was also involved but considerably less so than the left. The throat was extensively involved; the soft palate was fused

with the posterior pharyngeal wall, the uvula was absent, and the throat presented the appearance of a smooth, dry, continuous surface fused together. There was a small opening from the mouth to the nasopharynx. The mucous membrane of the nose was similarly involved. There was no involvement of the anus, urethra or vulva. There were no lesions on the skin and no history of such lesions. The patient complained of a dry burning sensation of the eyes and throat.

DR. J. V. KLAUDER: I think that this is the first case of the disease that has been shown before the society. The disease is rare; there are only four cases on file among many thousands of ophthalmologic cases at Wills Hospital. The disease is comprehensively described in a small volume by E. Franke (Der Pemphigus und die Essentielle Schrumpflung der Bindehaut des Auges, Wiesbaden, J. F. Bergmann, 1900), in which he compiled a hundred cases from the literature.

DISCUSSION

DR. J. F. SCHAMBERG: I agree with Dr. Klauder that this is a case of pemphigus conjunctivae. There is shriveling of the conjunctiva, and I notice that there is obliteration of the conjunctival sac, which one usually sees. Several years ago I had a patient with the most horrible pain from the traction on the conjunctiva consequent on movement of the eyeballs. I do not believe that this condition is a pemphigus in the dermatologic sense. I believe that true pemphigus is an infectious disease which in most cases leads to fatal termination, whereas this is an entirely different disease because it remains limited to the eyes and runs along for years and rarely, if ever, involves the skin. Thus, it is a pemphigus only in the ophthalmologic sense.

ERYSIPELOID OF ROSENBACH TREATED BY LOCAL INJECTION OF SERUM. Presented by DR. J. V. KLAUDER.

A Jewish woman, aged 68, from the clinic of Dr. Jay F. Schamberg, two weeks previously had removed a piece of cuticle from the left thumb, which caused bleeding. Several days afterward the thumb became inflamed. She did her own cooking. There was no history of being pricked by fish scale. She thought, however, that she cleaned fish about the time of injury to the thumb. She presents a typical picture of erysipeloid which involved the entire thumb, encircled the hyperthenar eminence and extended posteriorly for a small distance on the dorsum of the hand. The margin of the lesion was sharply marginated. The throbbing, burning pain had disturbed her sleep. On December 2, the entire margin of the lesion was infiltrated by subcutaneous injections of a total amount of 6 cc. of immune serum of bacillus of swine erysipelas (Mulford). On December 3, definite improvement was noted. On December 4, improvement continued, but the lesion had not entirely disappeared. Local discomfort disappeared. A total amount of 5 cc. of immune serum was injected locally in the aforementioned manner. On December 6, there was a considerable local reaction consisting of swelling of the injected area. On December 9, the swelling disappeared. The thumb and the areas into which injections had been given were normal. There was no evidence of erysipeloid.

SUBSEQUENT NOTE: Up to December 22, there had been no recurrence.

PEMPHIGUS. Presented by DR. B. L. KAHN.

S. L., a white man, aged 58, married, a peddler, presented himself at the Mount Sinai Hospital in Dr. Strauss' outpatient clinic on Nov. 14, 1930. He showed variously-sized blebs on the trunk, the face and the extremities. Some were ruptured and covered with crust. Lesions were also present on the bucal mucosa (left side) and on the groins. The condition dated back for two weeks. The first lesions appeared on the abdomen as circumscribed macules, turning subsequently into blebs. Afterward, lesions were noticed on the chest, and later they involved the face and the extremities. The patient presented healed lesions of tuberculosis; fifteen years previously he was in a sanatorium. Examination of

the blood showed: hemoglobin, 80 per cent; red cells, 4,390,000; white cells, 10,600—polymorphonuclears, 72 per cent; small mononuclears, 26 per cent; eosinophils, 2 per cent. Examination of the urine gave negative results. The patient died Dec. 11, 1931.

SUBCUTANEOUS XANTHOMA. Presented by DR. KATZ for DR. S. S. GREENBAUM.

A woman, aged 47, presented a patch of alopecia and a small mass below both eyes under the lower lids. At the eye clinic when she complained that the lower rim of the glasses pressed on the mass below the eye, the removal of the masses was recommended. The operation, during which one mass was removed, was performed on Oct. 23, 1930. Two weeks after removal, tissues above the site of operation began to swell. On two occasions some pus was removed; the last operation, to correct the postoperative deformity, was performed only a few days before presentation, and some blood was obtained. The patient thought that the mass was slightly smaller than it was a week previously, and gross examination of the tissue removed showed the following: firm consistency partly covered by wobbly, fatty tissue, macroscopically brown and granular and microscopically yellow. Examination of the blood showed 200 mg. of cholesterol per hundred cubic centimeters of blood. The blood count showed: 11,900 leukocytes on one occasion and 12,700 on another occasion. The pathologist who saw the specimens and also the microscopic slide agreed to the diagnosis of xanthoma.

DISCUSSION

DR. J. F. SCHAMBERG: Of course, in this case one has to rely largely on the microscopic diagnosis, and in such matters I should defer to the opinion of Dr. Weidman, who is a real expert in the subject. Under the microscope the lesion does not present the appearance of xanthoma to me. There are large cystic spaces, some of which are very large, and many of the smaller ones are filled with blood. I should be glad to hear from Dr. Weidman as to his opinion.

DR. S. S. GREENBAUM: This patient originally presented small oblong nodules underneath the lower lids, but I had no idea that this might be a case of xanthoma. The nodule on the left was removed without knowledge, and this patient came in with what looked like lymphatic obstruction following the operation. The pathologist reported xanthoma. None of the tissue was sectioned or stained to determine whether there was xanthomatous tissue, so that the diagnosis is entirely based on is the pathologist's report. The high cholesterol content of the blood would not necessarily make xanthoma of it, but I think that its presence points to the fact that there may have been some infiltration from a dismetabolism of the fats.

DR. F. D. WEIDMAN: When I first saw the section, I thought that the condition was a tumor due to paraffin oil. The Swiss cheese appearance was present, but there were no foreign body giant cells around the spaces. Furthermore, this site is not quite a fit place for the injection of paraffin oil, even cosmetically. A negative history of injections does not always decide. I recall a case shown at the meeting of the American Dermatological Association in Minneapolis. The patient, the wife of a physician, had a slight infiltration between her eyebrows, and she said that she had had no injection, but Dr. Ormsby at once settled the matter when he saw the section. It was a tumor due to paraffin oil. I do not think that the spaces in this case are those of fat, but gigantic lymphatic ones. If this case must be classified as xanthoma, it should be the xanthoma en tumeurs of the French, the kind that occurs in periosteum and sheaths. In these cases there is a secondary infiltration with cholesterol consequent on overloading of the blood with lipoid substances. There are xanthoma cells here. In Dr. Greenbaum's patient the condition may well be primarily a bony or cartilaginous tumor. Although I saw a rather suspicious collection of small round cells that made me think of lymphosarcoma, I should want to study additional sections before coming to a conclusion.

CASE FOR DIAGNOSIS. Presented by DR. M. BROWN.

In a man, aged 57, ten days previous to presentation, a circumscribed ulcer developed at the site of a fissure. When I first saw the ulcer the base was distinctly gangrenous, with black, foul-smelling gangrenous membrane. I did not see the patient long enough to make any studies. Urinalysis gave negative results for sugar and albumin, and there were a few blood cells.

DISCUSSION

DR. F. D. WEIDMAN: This reminds me of a case that Dr. Duhring reported many years ago as dermatitis neurogangrenous, which he thought was neurogenous in nature but which other dermatologists thought was factitious. How far the factitious factor enters here, it is hard to say, although the patient does not seem to have that mental slant. Perhaps his occupation is a factor that keeps the condition active.

DR. M. BROWN: When this condition started the man stopped working, so his work has not kept up the irritation. Factitious dermatitis occurred to me as a possible diagnosis. It would be hard to find a reason for it, however, as he is waiting for me to tell him that he can go back to work. He is not of the neurotic type, and I have known him for many years.

HYPERTROPHIC LICHEN PLANUS. Presented by DR. M. WOLFE.

A man, aged 40, presented a dry lesion of eighteen years' duration. The lesion was sharply marginated and somewhat elevated, with a rather purplish or violaceous hue and some epithelial plugs. About fourteen years before presentation the patient contracted syphilis. He had had no treatment until the past year, when he received an intensive course of antisyphilitic treatment.

DISCUSSION

DR. R. GILMAN: What seems to be the best form of therapy for this condition that has lasted eighteen years?

DR. J. F. SCHAMBERG: I believe that in a case of this kind it is well to give single and long-spaced, heavy doses with the x-rays. I should not object to using an erythema dose, waiting one month, and then giving another erythema dose.

MILIARY TUBERCULOSIS OR SYPHILIS. Presented by DR. PILLSBURY for DR. JOHN H. STOKES.

A man, aged 21, presented on November 2 a bizarre papular eruption involving the thorax and extremities, with the exception of the face, hands and feet and partial exemption of tattoo marks on the forearm. The lesions were distinctly grouped in the center; they had a tendency to atrophy and on pressure showed apple jelly nodules. The patient spent several months in a tuberculosis sanatorium. He had incipient, bilateral, apical tuberculosis; examination of the sputum always gave positive results. The present eruption appeared April, 1930; all lesions appeared in the space of a few days and were accompanied by chills and fever. The Wassermann reaction of the blood was strongly positive. The patient was treated with sodium bismuth tartrate, and marked involution of the lesions occurred.

DISCUSSION

DR. J. V. KLAUDER: The fact that the eruption promptly involuted following injections of bismuth suggests a syphilid. However, the lichen lesion of syphilis is one of the cutaneous lesions of syphilis that remains longest following antisyphilitic treatment and is the slowest to involute.

DR. J. F. SCHAMBERG: This is an extremely interesting case on account of the great extent of the scars, indicating an extensive eruption. I think that the rapid involution under bismuth in four weeks definitely stamps the eruption as syphilitic. It is apparently one of those early tertiary types that occur perhaps

in the second or third year of infection. It is almost a late secondary case on account of the extent of diffusion of the eruption. I hardly believe that any eruption of a tuberculous nature would disappear with such rapidity under bismuth. There is complete involution at the present time.

Dr. F. D. Weidman: I want to explain the apparent conflict quoted in the matter of histologic diagnosis between tuberculosis and syphilis. My report histologically was that the picture of tuberculosis was a good one, but in the case of the earliest syphilitic gummas it may be identical with tuberculosis. One has to wait for later stages before earmarks of syphilis are seen in the case. This is a particularly difficult case to decide, because the subject is certainly tuberculous. The histologic observations were compatible with tuberculosis. There is thus a clash between this group of criteria and the therapeutic ones, and I think that it is a difficult matter to appraise which of those phases has the greatest weight. I know that the neurologists, who have to discriminate particularly carefully as to the relative weight of different criteria in diagnosis, have declared definitely that if there is any one criterion that stands out rather independently against a number of others, even though those others individually are not as important as the single differing one, the sum total of those symptoms in favor of one diagnosis should be the ones to bear weight against a single outstanding symptom. The only contradictory item in the whole complex is the therapeutic response, and I think that one ought to make mental reservations as to whether the lesions of the skin in this man are those of tuberculosis or syphilis.

Dr. A. Strauss: Recently I saw two cases that were very similar in type and in the grouping of lesions but in which the distribution was less. Both of these cases occurred in very young persons, and I was able to get a definite history that in both cases the infection took place within six months before the appearance of this type of eruption. I am inclined to say that these are what might be called very early, late secondary cases.

Case for Diagnosis. Presented by Dr. M. S. Ireland for Dr. H. Stokes.

A young woman, colored, had been under treatment for syphilis for five months. The present eruption appeared two months before presentation, after she had been given twelve injections of neoarsphenamine and three of bismuth, preceded by a slight pruritus. The eruption was more or less generalized, deeply pigmented, grouped, follicular and papular; it was rough and spinulous to the touch.

DISCUSSION

Dr. J. F. Schamberg: This patient has several lesions that suggest pityriasis rubra pilaris. I think that this diagnosis should be considered, as on the back of the neck there are pinhead, aggregated elevations of distinctly nutmeg grater character.

Dr. V. Garner: It is rather interesting that this condition arose during a course of medication with bismuth and involuted now that the patient is receiving arsphenamine.

Mycosis Fungoides in the Fungating Stage. Presented by Dr. Pillsbury for Dr. John H. Stokes.

A man, aged 60, presented a scaly erythrodermia of nine years' duration. The fungating lesions developed last summer. A biopsy of the skin and lymph glands performed last summer showed subacute dermatitis and subacute lymphatitis. During the summer typical lesions of mycosis fungoides appeared.

DISCUSSION

Dr. F. D. Weidman: I was not able to diagnose this case histologically last summer. Of course, that is often one's experience. I reviewed the sections, and looking backward I can see how the changes were compatible with this diagnosis, although I could not at the time distinguish it from Hodgkin's disease.

DERMATOLOGICAL CONFERENCE OF THE MISSISSIPPI VALLEY

Fourth Annual Session, St. Louis, Dec. 6, 1930

RICHARD S. WEISS, M.D., *Presiding*

A CASE FOR DIAGNOSIS (HEBERDEN'S NODES?). Presented by DR. M. F. ENGMAN and DR. W. H. MOOK, St. Louis.

M. B. D., a white woman, aged 49, stated that her present illness had begun suddenly eight years previously, with involvement of the joints of the fingers of the right hand. The other joints, large and small, were involved one after the other quite rapidly.

The nodules had also first appeared eight years previously as a small lump in the skin of the right forearm near the elbow. From that time on numerous similar nodules, some quite large, appeared on the extremities. At times some of the nodules became inflamed, broke down, ulcerated and healed. They were present chiefly over the extremities near the large joints. There were a few over the occiput and few small ones in the margins of the gums. They were from 0.5 to 2 or 3 cm. in size, situated deep in the skin, and were freely movable over the subcutaneous tissue. They were hard and slightly tender.

The Wassermann reaction was negative. Examination of the blood showed: red cells, 4,000,000; hemoglobin, 55 per cent; white cells, from 7,500 to 10,000; blood culture, negative; nonprotein nitrogen, 24 mg. per hundred cubic centimeters, and calcium, 10.4 mg. The urine was normal.

Sections from the subcutaneous nodules showed a tuberculous structure containing considerable necrotic material and a fibrous rim of connective tissue and inflammatory cells; an occasional atypical giant cell was seen.

DISCUSSION

DR. W. H. GOECKERMAN, Rochester, Minn.: I think that anything one could contribute would have to be decided largely by histopathologic observations, and it would be necessary to study further sections.

DR. PAUL A. O'LEARY, Rochester, Minn.: An unusual clinical picture such as this does not, of course, permit of a conclusive opinion following a rather cursory examination. I have not endeavored to associate the cutaneous lesions with the constitutional picture. A plausible explanation would seem to lie in the fact that the nodules are unusual manifestations of Heberden's nodes, and I believe that the histopathologic picture would coincide with this explanation.

DR. WILLIAM H. MOOK, St. Louis: When the patient was first seen about nine years ago, she had only the arthritis. About eight years ago, tumors began to develop as soft nodules, and within four or five months the nodules became inflamed, ulcerated, broke down, discharged and healed. These lesions occur principally on the extremities and on the areas of the body mostly exposed to trauma, but they also occur in the gums, pharynx, throat and scalp. The patient has been examined by most of the physicians at Washington University, and so far no one has offered a diagnosis. The histologic picture is somewhat that of tuberculosis, although more of a granuloma. The case was presented for diagnosis.

DR. KARL G. ZWICK, Cincinnati: Has the content of the nodules been removed and examined for uric acid?

DR. W. H. MOOK, St. Louis: No, the content has not been examined. At first, the lesions are soft, like lipomas. Later they break down, discharge pus and then heal. This process takes from four to five months, but then the lesions heal promptly.

SCLERODERMA. Presented by DR. M. F. ENGMAN and DR. W. H. MOOK, St. Louis.

W. T., a white girl, aged 9, stated that her present trouble had begun four and one-half years previously as a small sclerotic patch on the left arm. Patches occurred on the outer side of the hand just below the wrist and on the right arm.

The eruption extended from the shoulder to the tips of the thumbs in a line from 2 to 2½ inches (5 to 6.27 cm.) wide. It was more or less symmetrical, and consisted of a hard sclerotic tissue typical of scleroderma. There had been marked improvement under thyroid therapy.

The basal metabolic rate was minus 7 per cent.

This case was shown to demonstrate the marked improvement under thyroid therapy.

HYDROA ESTIVALE? EPIDERMOLYSIS BULLOSA? Presented by DR. R. S. WEISS, St. Louis.

C. B., a white girl, aged 3½ years, from the clinic of Dr. Engman and Dr. Mook at Washington University Dispensary, had an irrelevant family and past history. The present illness began at about the age of 4 weeks with what were apparently infections of the nail beds. At the age of 5 weeks, both thumb-nails were removed; all the other finger-nails then became "infected." The patient had had a "milk rash" at the age of 8 weeks.

At the age of 1 year she had had purulent otitis, which was followed by an eruption of blisters first on the feet and then on the hands. The blisters had been appearing and disappearing ever since, being much worse in the summer; they almost disappeared in the winter.

When the patient was seen about April 3, 1930, she had an eruption involving the cheeks, forehead, sides of the neck, flexor and extensor surfaces of the elbows and forearms, dorsal and palmar surfaces of the hands and fingers and the surfaces of the knees, legs and feet.

The lesions began as bright red papules, the size of a pinhead, on the surface of which a small vesicle formed. The lesions gradually grew larger. Many of them were surrounded by an areola of bright to dull red. On the lower portion of the legs and on the ankles and feet small bullae appeared, some with areolas and some arising from the normal skin without any color. Many of the bullae ruptured and became covered with a dry crust. The crusts fell off, and a small reddish plaque was left which healed by absorption, leaving pigmented spots and a few scars.

Examination of the urine revealed no abnormalities. Hematoporphyrin was not found. Examination of the blood showed: white cells, 10,250; Schilling differential count: basophils, 1 per cent; eosinophils, 2.5 per cent; stab cells, 2 per cent; segmented cells, 48.5 per cent; lymphocytes, 38.5 per cent; monocytes, 6 per cent, and juveniles, 1.5 per cent.

A tiny bulla from the side of the foot was excised and sectioned. The hematoxylin and eosin stained specimen showed a small subepithelial bulla filled with strands of fibrin containing a few lymphocytes and polymorphonuclear cells. There was a slight inflammatory reaction about the vessels in the cutis, and the surrounding epithelial layer showed definite acanthosis and some balloon degeneration. The epithelium far to the side of the bulla was apparently normal, as was the cutis.

During the cooler weather of the fall of 1930, the patient had improved markedly; at the last examination, there were only pigmented spots and a few scars, chiefly on the exposed areas.

DISCUSSION

DR. F. E. SENEAR, Chicago: I do not have a different diagnosis to offer in this case, but I find it hard to agree with the one presented. The eruption is confined to the extremities and does not involve the face. The patient has the eruption in the summer as well as in the winter, and the mother told me that during

both seasons she had been treated with ultraviolet light. She improved under this treatment in the winter, but not in the summer. On considering other conditions which might occur on the extremities and which might undergo exacerbation in the summer, in spite of the fact that the clinical description and the history do not exactly fit lichen urticatus, I would be more in favor of that diagnosis than of hydroa estivale.

DR. HAROLD N. COLE, Cleveland: I am inclined to agree with Dr. Senear. The location of the lesions possibly would be more characteristic of conditions other than hydroa estivale. The patient has changes in the nails and a definite history of the formation of bullae. I wish to present the diagnosis of a dystrophic type of epidermolysis bullosa.

DR. ERICH BROCKELMANN, St. Louis: I did not use ultraviolet light in the treatment of this patient, but gentian violet.

DR. KARL G. ZWICK, Cincinnati: May I suggest that it would be interesting to test the action of ultraviolet light on the patient's skin? If a characteristic reaction follows exposure, it would clinch the diagnosis of hydroa estivale.

DR. R. S. WEISS, St. Louis: We had considered a diagnosis of epidermolysis bullosa and bullous erythema multiforme, but the diagnosis of lichen urticatus had not occurred to us, for this reason; when the child was first seen, she had definite bullae in the summer, some of which were surrounded by a halo of erythema, but the majority sprang from normal skin. We noted the disturbance of the nails and thought of epidermolysis bullosa, but could not produce lesions by trauma. We investigated for porphyrin bodies, but could not demonstrate them. The lesions are now disappearing. She had some bullae during the hot weather, but they disappeared when it became cooler, and for this reason we thought that hydroa estivale was the best diagnosis. The patient's mother said that the child had been treated with ultraviolet light both in the winter and in the summer and that confused us.

NOTE.—The patient was again seen three weeks after the meeting with a fresh crop of bullae, the first that she had had in the winter.

A CASE FOR DIAGNOSIS (PEMPHIGUS VULGARIS?). Presented by DR. W. H. MOOK, St. Louis.

Mrs. K. R., a white woman, aged 62, from the clinic of Dr. Engman and Dr. Mook, stated that her present illness had begun five years before she entered the clinic. A rubber dental plate that she had been wearing broke and was replaced with a metal one. Blisters then appeared in the mouth and had been present ever since, with remissions and exacerbations. She had since had a cough, with some expectoration.

Physical examination revealed evidence of chronic bronchitis. After the injection of iodized oil, examination of the lungs showed a normal distribution of the oil; evidence of bronchiectasis was not found.

On the mucous membrane of the hard and soft palate and on the gums were numerous superficial ulcerations, some with red bases and some covered with a grayish membrane. The distribution on the hard palate was horseshoe-shaped, as if from pressure by the dental plate. The lesions were primarily bullae, which had been seen from time to time and which ruptured quickly.

Examination of the nose revealed maxillary sinusitis. Examination of the larynx revealed redness and fulness of the arytenoids and aryepiglottic folds. The right arytenoid showed remains of small bullae.

The urine was normal. The sputum was negative for the Koch bacillus. Smears and cultures did not show Vincent's organisms or fungi, except that on Sabouraud's medium a few yeast type fungi were grown. These were probably not of significance. Examination of the blood showed: white cells, 9,800; red cells, 4,100,000; hemoglobin, 75 per cent; Schilling count: basophils, 0; myelocytes, 0; eosinophils, 1 per cent; stab cells, 2.2 per cent; segmented cells, 70 per cent;

lymphocytes, 26.4 per cent; monocytes, 0; sugar, 125 mg. per hundred cubic centimeters. Gastric analysis gave essentially normal results, both chemically and microscopically.

DISCUSSION

DR. PAUL A. O'LEARY, Rochester, Minn.: In spite of the history of a duration of five years, I believe that a diagnosis of pemphigus is warranted. I have noted that, particularly in elderly persons, the cutaneous lesions are apt to develop years after the appearance of the lesions of the mucous membrane. I believe that the longest period we have observed preceding the appearance of the cutaneous lesions was in a woman in whom bullae were present in the mouth for several years before cutaneous bullae appeared.

DR. THEODORE GREINER, St. Louis: This patient was presented at the St. Louis Dermatological Society in 1925, and at that time the consensus was that the condition would eventually prove to be pemphigus.

DR. KARL ZWICK, Cincinnati: Judging from the patient's statements, there seems to be some connection between the time she started to use certain dental plates and the appearance of the lesions. Her observation on this point seems to deserve consideration in view of the fact that, recently, publications in the dental literature traced similar lesions to the composition of the material used in the dentures. According to the publications mentioned, from this material, the so-called artificial rubber of the dental plates, formaldehyde may be set free gradually on prolonged contact with moisture. Tests revealed that after application of the material to the oral mucosa, lesions developed in the mouth.

DR. CLARK W. FINNERUD, Chicago: Dr. O'Leary's remarks interest me, because we have come to believe, quite to the contrary, that the cases of pemphigus which are most rapidly fatal are those in which the lesions are primarily in the mouth.

DR. W. H. MOOK, St. Louis: When I saw this patient for the first time five years ago, I made a diagnosis of pemphigus because there were definite bullae on the mucous membrane of the mouth. I lost sight of her until a few months ago, and she then had exactly the same lesions and was in the same physical condition as at first. When I saw her the second time, owing to the fact that further lesions had not developed, I changed my diagnosis; I thought that the condition might be due to the chemical composition of the plates. I still am not convinced that the condition is pemphigus, for I have been under the impression that pemphigus usually develops generally within two years. We have had some cases in which this occurred.

DR. EVERETT S. LAIN, Oklahoma City: During the past few years, I have seen a number of cases of eruptions of the mouth similar to the one presented. Many of the eruptions are definitely outlined by the dental plates or other dentures. I have called on the dentists to assist me in such cases, and in several instances we have proved that the condition was due to coloring matter in the cheap grade of rubber used. Red oxide and sulphides of mercury are the common coloring matter in rubber. I have had cause, also, to suspect light-colored gold and have taken up the matter with manufacturers. They furnished the information that white gold contains an alloy of nickel. In the case presented, I was impressed with the possibility of a chronic dermatitis caused by nickel, possibly from the hardening alloy in the aluminum plate that the patient has been wearing for the past few weeks. I also noted that the plate was very rough on the surface near the palate. I have learned that loosely fitting upper plates are a frequent source of trouble in the hard palate owing to constant trauma.

DR. HAROLD N. COLE, Cleveland: From the patient's history of recurring bullae and the healing and recurrence of red, open, painful sores, I thought that the case was one of Mueller's glossitis.

DR. DAVID LIEBERTHAL, Chicago: We should not be too hasty in making a diagnosis of pemphigus, as this diagnosis means a verdict of fatal termination.

The condition of the patient is evidently due, to a great degree, to the denture she is wearing. Judging from the appearance of the tip of the tongue and the hard palate, I am inclined to agree with the opinion expressed by Dr. Cole.

DR. CLINTON W. LANE, St. Louis: I suggest that a specimen of the patient's blood be forwarded to Dr. Pels in Baltimore for the photopharmacologic test. He has compared the effects of the blood in numerous diseases of the skin on the growth of a certain plant. The normal reading is given as 70 and 75 per cent; a reading above 75 per cent is of no importance. Pemphigus is the only disease in which they have found a constant reading below 70 per cent, which is classed as toxic. We have sent five or six specimens to him from Barnard Skin and Cancer Hospital, and the reports have closely concurred with the physical observations and the subsequent course of the disease.

DR. R. S. WEISS, St. Louis: The patient has not worn the dentures for about six weeks, and the lesions continue to appear. In the history there is a record of her examination at the nose and throat clinic, and it seems to me that the lesions in the larynx are more in favor of pemphigus than the bullous eruption in the mouth.

FOX-FORDYCE DISEASE WITH LESIONS ON THE AREOLAE. Presented by DR. R. S. WEISS, St. Louis.

Mrs. M. E., a white woman, aged 32, from the clinic of Dr. Engman and Dr. Mook, stated that her present illness had begun in September, 1926, and had remained in its present state, with slight exacerbations and remissions. The primary lesions were hard, somewhat conical papules, the surface of which was slightly keratotic and most of which appeared to be follicular. They were fairly thickly distributed in the axillae and under the pubic hair; similar scattered papules were found on the areolae, some with the tops scratched off. The papules were intensely pruritic at times.

A CASE FOR DIAGNOSIS (LUPUS ERYTHEMATOSUS? LICHEN PLANUS?). Presented by DR. R. S. WEISS, St. Louis.

Mrs. T. L., a white woman, aged 39, from the clinic of Dr. Engman and Dr. Mook, said that her present illness had begun about eighteen months previously when she noticed a sore spot on the center of the lower lip. This gradually spread until both upper and lower lips were affected. Six months later she noticed an eruption on the buccal mucous membranes, and then a spot appeared on the anterior third of the tongue. The lesions had persisted, with exacerbations and remissions, to the time of presentation.

The central two thirds of the lower lip presented a slightly thickened, scaly condition, sharply defined and occupying mainly the anterior portion. It looked somewhat as though collodion had been painted on the lip. On the left buccal mucous membrane was an irregularly semicircular streak of grayish-white epithelial hyperplasia. On the right buccal mucous membrane, extending about 2 cm. directly back from the right oral angle, was a similar patch about 0.75 cm. in width. On the anterior and right side of the tip of the tongue was a roughly oval denuded area of about 0.75 by 0.25 cm. On the tip of the tongue was a slightly depressed, "glazed," oval area, about 0.75 by 0.5 cm. in size.

General physical examination gave negative results.

DISCUSSION

DR. CLARK W. FINNERUD, Chicago: Because of the appearance of the cutaneous lesions, plus the fact that there are two or three distinct lichen planus-like papules on the tongue, I think that the case is definitely one of lichen planus.

DR. UDO J. WILE, Ann Arbor, Mich.: I think that the case is one of lichen planus in an unusual localization on the lip. It is about ten years since the first

discussion of lichen planus occurring in the mouth alone took place in Minneapolis, where the patient was shown. Since that time it has been demonstrated that lichen planus is frequently found in the mucosa alone. The more one looks for it in unusual places, the more, I think, one will find it. I have seen lesions on the inner aspect of the labia majora, and within the last two months we have had a case limited to the upper and lower gums. Lichen planus of the scalp in association with that of the mouth and body is not unusual, but is infrequently reported because it is not customarily looked for. I think that all of the cases that have been presented with the possible diagnosis of lichen planus of the mouth are cases of that disease.

Dr. H. E. Michelson, Minneapolis: I wish to recommend the more frequent use of the biopsy in lesions of the mucous membranes. The punch may be used as it is in the skin, and the material is as valuable as in cutaneous lesions. Lichen planus presents virtually the same picture in the mucous membrane as in the skin.

Dr. R. S. Weiss, St. Louis: This case interested us considerably because of the variety of lesions. At one time the lesions on the lip were like those of lupus erythematosus, with a collodion filmlike appearance, and on the buccal mucous membrane they were like the lesions of lichen planus. The tongue sometimes looked like a geographical tongue and again like Mueller's glossitis.

Dermatosis Papulosa Nigra (Michael and Seale). Presented by Dr. W. G. Coleman, St. Louis.

Mrs. O. C., a colored woman, aged 32, from the clinic of Dr. Engman and Dr. Mook, presented herself because of lesions on the face of three years' duration. There were scattered papules on both cheeks and the nose, and a few were seen on the upper eyelids. These papules were from 1 to 3 or 4 mm. in diameter and were slightly darker than the normal skin; a few were black. They were roughly circular or oval and were elevated from 1 to 2 mm. They did not appear to be follicular.

DISCUSSION

Dr. E. R. Seale, Houston, Texas: This case is typical of the condition Dr. Michael and I described. It was seen only in the Negro race, with the exception of two cases which occurred in Mexicans.

Lichen Obtusus Corneus. Presented by Dr. W. G. Coleman, St. Louis.

Mr. A. D., a white man, aged 87, from the clinic of Dr. Engman and Dr. Mook, was first seen in March, 1920, with an eruption limited to both legs of several years' duration. The anterior and lateral surfaces of both legs were literally covered with a closely set eruption of hard, conical, bluish-red papules. The skin was hard, boardlike and very tense.

He had been seen at infrequent intervals since entering the clinic, and during this interim was treated in the Barnes Hospital for persistent fistula of the bladder (suprapubic cystotomy for an enlarged prostate had been performed in 1919). He was last seen in November, 1927, when his condition was about the same.

At the time of presentation he was suffering from all the disabilities of extreme old age, and he presented patches of the same type of lesions as previously over the sacral area and scattered on the trunk.

Examinations of the blood did not reveal abnormalities, and the urine showed evidence of chronic nephritis.

Microscopic examination of a section stained with hematoxylin and eosin showed marked acanthosis and hyperkeratosis, with dilatation of the vessels in the cutis and slight round cell infiltration about the vessels. There was no subepithelial infiltration, as occurs in lichen planus. The hyperplasia and hyperkeratosis were quite marked about the glandular structures. Sections stained with polychrome methylene blue-glycerin ether and Weigert's elastic tissue were also exhibited.

DISCUSSION

DR. H. E. MICHELSON, Minneapolis: If the presenter uses the term lichen obtusus corneus in the same sense that we use prurigo nodularis, I cannot agree with the diagnosis. I think that the case is one of lichen chronicus simplex of the gigantic type, as described by Brocq. I suggest making a section and staining for amyloid, for amyloid degeneration is found in the papillary layer in many conditions diagnosed as lichen chronicus simplex. There was a splendid article by Freudenthal, of the Jadassohn Clinic, in the last issue of the *Archiv für Dermatologie und Syphilis.* He found amyloid in a number of conditions, especially some which might be termed precancerous. If Dr. Coleman wishes, we would be glad to stain this tissue for him, as Dr. Winer of my clinic has done considerable work on amyloid.

DR. JOSEPH GRINDON, St. Louis: I think that the case is one of neurodermatitis of Brocq, the same as the lichen circumscriptus of Widal. The cases described by Brocq have three zones. We did not see the zones in the case presented, but the general character of the patch, with its large, rounded papules, is to my mind quite different from the picture of lichen planus obtusus. I believe that this condition is the same as that which the French call neurodermatitis "à grosses papules."

DR. DAVID LIEBERTHAL, Chicago: Has the patient been treated for the condition?

DR. R. S. WEISS, St. Louis: The patient is very feeble, lives out of town and comes in only when we send for him, so that nothing has been done.

DR. DAVID LIEBERTHAL, Chicago: I wish you would compare this case with the one I demonstrated at the meeting of the American Dermatological Association in 1914. It was nearly a duplicate of the case presented, and was designated as lichen planus, which diagnosis caused considerable discussion. I had the patient under my care for a few months, and his condition cleared up after the internal use of solution of potassium arsenite and various local applications. The case was published in *The Journal of the American Medical Association* in 1916, under the name of "Shinguard Type of Lichen Planus."

A CASE FOR DIAGNOSIS (LICHEN PLANUS? PSORIASIS? PITYRIASIS LICHENOIDES CHRONICA [Juliusberg]?) Presented by DR. HENRY C. SHAW, St. Louis.

O. L., a colored woman, aged 24, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that ever since she could recall she had had an eruption on the body and legs which was worse in summer and early fall. Until five years before presentation, the eruption had been limited to the legs and thighs, but it then began to extend up the trunk and around the neck. Until that time the eruption had been composed of small papules; then the papules began to spread and became scaly.

There was an eruption composed of dark brown maculopapules, varying in size from 1 mm. to 2 cm., over the back, the anterior surface of the chest, the breasts and the lower part of the abdomen and on the extensor and flexor surfaces of the legs and arms. The smaller lesions were angular, and the larger ones showed considerable desquamation.

The Wassermann and Kahn tests of the blood gave negative results.

In one area the epithelial pegs were quite swollen; the basal layer was intact, and there was a definite increase in the cellularity. In the corium, there were a few small areas of cellular infiltration and edema, which under high power were seen to be made up of polymorphonuclear cells and a few lymphocytes.

DISCUSSION

DR. CHARLES D. FREEMAN, St. Paul: I thought that the papules were typical of lichen planus, especially those on the anterior aspect of the right wrist. There were also lesions on the upper part of the neck which I thought were typical of lichen planus; some of them had become atrophic, but there were a few that were still typical papules.

DR. CLARK W. FINNERUD, Chicago: I thought that the case was definitely one of psoriasis. There was pitting of the nails, and I think that the lesions of the skin were clinically characteristic of that disease. Furthermore, there were typical Munro abscesses in the sections, as well as other characteristic histologic features of psoriasis.

DR. KARL G. ZWICK, Cincinnati: I considered the diagnosis of psoriasis guttata, but am inclined, because of the slight atrophy in the majority of the lesions, to offer the tentative diagnosis of pityriasis lichenoides chronica, Juliusberg.

A CASE FOR DIAGNOSIS (MYCOTIC INFECTION? BRASS IRRITATION?). Presented by DR. HENRY C. SHAW, St. Louis.

D. L., a Negro, aged 49, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that his present illness had begun two years previously as a nodulopapular eruption on the back of the neck and behind the ears, which progressed steadily to involve the cheeks anterior to the ears. This eruption had been intensely pruritic since its beginning and was limited to the areas noted.

The primary lesions were minute papules, smaller than a pinhead; some of them were accuminate; others were oval and round. The older lesions were caused by the growth of the original papule. These lesions were pointed, firm papules, varying in size from 1 to 5 mm., with a smooth surface, but some showed a central umbilication. The papules were shiny and glistening.

The Wassermann and Kahn reactions were negative.

Mild acanthosis and some intercellular edema were seen. There was a diffuse cellular infiltration of the papillary part of the corium, consisting of leukocytes, lymphocytes and a few fibroblasts.

DISCUSSION

DR. H. N. COLE, Cleveland: The condition may be due to a mycotic infection.

DR. HOWARD J. PARKHURST, Toledo, Ohio: I found a few of the horny lesions on the eyelids, and the individual lesions on the border of the lichenification behind the ears rather suggested the lesions of another patient who was presented with many small lesions about the eyelids, which I thought was a case of miliary tuberculosis. A biopsy should be made to at least rule this out.

DR. S. GOLDBLATT, Cincinnati: The fact that Dr. Parkhurst found lesions around the eyelids brings out the point the patient gave me, that he had been wearing for a long time glasses with brass rims which had been discolored where they came in contact with the ears and the nose. Possibly the whole eruption is due to a metallic discoloration.

DR. KARL G. ZWICK, Cincinnati: I agree with Dr. Goldblatt. The patient expressed the opinion that the bows of his spectacles consisted of so-called "white gold." Since this material, as Dr. Lain brought out, contains nickel, to which some persons become sensitized (allergic), I am inclined to consider the material of the bows as an etiologic factor in the patient's condition.

DR. CLARK W. FINNERUD, Chicago: I have made cultures in many postauricular cases in which the lesions were as sharply defined and as infiltrated as in this instance, and in the majority of them I have grown yeasts, usually *Cryptococcus.* I think that the case presented is an example of postauricular mycotic infection. The patient also had a mild acne, and, from the history, he had apparently had it in some degree for years.

ATROPHY OF THE CHIN AND UPPER LIP ("TRICHO" TREATMENT). Presented by DR. CLINTON W. LANE, St. Louis.

J. P., a white woman, aged 22, stated that three years before presentation superfluous hairs on the chin and upper lip had been removed by the "Tricho"

method. This caused most, but not all, of the hairs to disappear. In May, 1930, she noticed throbbing in the chin, most marked on the left side. At times this was changed to a "tingling" sensation. Recently she had noticed "tingling" in the throat and lips, with marked dryness of the mouth. The skin on the chin felt quite dry.

The skin of the upper portion of the face was smooth and quite oily. The texture of the skin on the chin was rougher and dryer, and on its lateral surfaces there were numerous small atrophic lines. A few telangiectases were just appearing. No coarse hairs were present, but down hairs were seen on the undersurface of the chin. A similar, but less marked, condition was present on the upper lip.

POIKILODERMA ATROPHICANS VASCULARE? Presented by DR. HENRY C. SHAW, St. Louis.

W. G., a white man, aged 54, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that his present illness had begun as a redness of the arms ten years prior to admission, which spread until the entire body was involved. The condition was aggravated after bathing. The patient was first seen in the clinic in 1925, but had shown practically no change since admission.

The eruption was generalized and consisted of telangiectasis, reticulation and slight pigmentation, with atrophy and wrinkling.

Urinalysis showed albumin, but no cells or casts. Examination of the blood showed: hemoglobin, 90 per cent; red cells, 5,100,000; white cells, 8,200. A smear was normal. The Wassermann and Kahn reactions were negative.

A biopsy made on March 5, 1925, of the skin from the chest showed chronic inflammation and hyperkeratosis. On May 1, 1929, there were mild hyperkeratosis and thinning of the rete, probably from cellular infiltration in the upper portion of the corium. The infiltration consisted of lymphocytes, leukocytes, plasma cells and fibroblasts.

POIKILODERMA ATROPHICANS VASCULARE. Presented by DR. CLINTON W. LANE, St. Louis.

Emma S., a white woman, aged 52, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that the disorder of the skin had begun as a diffuse redness of the arms, neck and face, which spread progressively to involve the entire body. She had had an occasional bleb on the arm. The redness had gradually assumed a more fiery appearance, with occasional itching and burning. During the course of observation, the condition had varied, at times showing remission, only to be followed by a more intense eruption.

The eruption was most marked on the forehead and cheeks, in the axilla and groins and under the breasts.

Although the color first appeared to be a uniform fiery red, there was a reticulation, particularly on the forehead, apparently produced by atrophy and minute telangiectases on the surface. The atrophy was more marked on the chest, as was evidenced by the increased wrinkling.

A roentgenogram of the chest did not show a pathologic lesion. The basal metabolic rate was minus 1 per cent. The Wassermann and Kahn reactions were negative. The nonprotein nitrogen was 37 mg.; the calcium, 9 mg.; the chloride, 0.610 mg., and the urine (obtained by catheter), normal. Examination of the blood showed: hemoglobin, 90 per cent; red cells, 4,300,000, and white cells, 5,400.

Biopsy showed mild hyperkeratosis, but not parakeratosis. The entire rete was thinned out, and the rete pegs were completely flattened. A slight amount of round cell infiltration was seen about the blood vessels of the upper cutis and about the sweat glands.

DISCUSSION

DR. UDO J. WILE, Ann Arbor, Mich.: I do not think that any of us has seen enough cases of poikiloderma atrophicans vasculare in which all were agreed on the diagnosis to be able to say that the cases presented are examples of that disease. However, I think that the two cases shown had the characteristics that were originally described by Jacobi, namely, the appearance on the skin of a reticulated atrophy in association with changes that might be simulated by irradiation. We had occasion to show a case identical with the one presented by Dr. Shaw at the Ann Arbor meeting of the Chicago Dermatological Society in 1928, but only about half of the members present thought that the case was one of poikiloderma, the others regarding it as Hutchinson's serpiginous angioma. No one seems to know exactly what poikiloderma vasculare is. One or two patients whom we have followed up have been shown to have died of cancer of the abdomen. Others seem to enjoy, as these patients do, good health, except for the unusual changes in the skin. Most of the cases reach a certain point and then do not progress. I think that Dr. Lane's case has been in this stage for a long time. There does not seem to be a general opinion as to what constitutes true poikiloderma, and there is neither a background for it, nor associated observations, except for the occasional one of an abdominal neoplasm.

DR. HOWARD J. PARKHURST, Toledo, Ohio: I agree with the diagnosis of poikiloderma in the case presented by Dr. Lane; most of the signs were typical of that condition. In the case presented by Dr. Shaw, I was not so sure of the diagnosis. In his case the lesions seemed to be definitely elevated above the surface of the skin, with a regular arrangement which was somewhat suggestive of parakeratosis variegata.

DR. W. H. GOECKERMAN, Rochester, Minn.: I agree with Dr. Wile. I have repeatedly read Jacobi's original description to see what we might be dealing with in what he calls poikiloderma. His description is apparently morphologic only, and does not mean more than that. I do not believe that these cases fit the original description. I have seen only one case in our clinic that I felt answered the description, and when I was in Europe last year with Professor Jadassohn he showed me a case that I felt was exactly what I would call poikiloderma, based on morphologic characteristics. If the characteristics are as definite as that, we are calling a number of conditions poikiloderma that do not answer Jacobi's original description. I have a strong suspicion that poikiloderma may merely be a different type of some condition producing atrophy that we have been familiar with in the past.

DR. LESTER WIEDER, Milwaukee: In the case presented by Dr. Shaw, I thought the uniform involvement of all parts of the body was more in favor of parakeratosis variegata. The elbows and other bony prominences showed practically the same degree of involvement as the chest, abdomen, etc. There was little atrophy, and a diffuse, reticular, faintly scaling, lichenoid eruption was present. Dr. Finnerud saw this patient at the same time I did, and we arrived at the same diagnosis independently.

DEVERGIE'S DISEASE. Presented by DR. HENRY C. SHAW, St. Louis.

V. O., a white woman, aged 26, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that her disorder had begun in January, 1929, as a papular eruption on the neck, chest, abdomen, back and arms, which had caused practically no symptoms.

There were yellow-tinted, slightly scaly, plaques on the neck, arms and trunk, varying in size from 5 cm. to lesions involving almost the entire back, with sharply defined borders. There was tylosis of the palms and soles, with hyperkeratosis under the finger-nails. Primary lesions were seen at the edges of the plaques, which were yellowish and scaly follicular maculopapules.

The urine was normal. Examination of the blood showed: hemoglobin, 85 per cent; red cells, 5,100,000; white cells, 8,700. Repeated examinations of scales were negative for mycelia and spores.

Biopsy showed hyperkeratosis throughout most of the section, with marked thickening of the stratum corneum at the pilosebaceous orifices; the lamellae were stretched and separated, owing to air spaces. Parakeratosis and moderate acanthosis were present. There was also an infiltration of round cells into the upper portion of the corium.

DISCUSSION

DR. H. E. MICHELSON, Minneapolis: My diagnosis is pityriasis rubra pilaris, because of the marked plantar and palmar keratoderma and the subunguinal keratoma, and because the microscopic section showed that there was hyperkeratosis of a lamellar type in the follicular aperture.

DR. W. H. GOECKERMAN, Rochester, Minn.: We had this patient under observation when the condition was in the eruptive stage, and I thought that it was a typical case of Devergie's disease. I think that we saw the patient first, and that from a history obtained from one of the hospitals we agreed on the diagnosis. The interesting point to me is that the eruption cleared up in so short a time. The striking fact, so far as I know, is that the case showed periodic exacerbations, whether or not treatment was given. I cannot say whether anything we did had any particular influence on the course of the disease, but it was interesting to watch the condition clear up completely in a comparatively short time.

DR. CLINTON W. LANE, St. Louis: This patient was at the Skin and Cancer Hospital about eighteen months ago, and at that time a typical pityriasis rubra pilaris was present. After she left our clinic she went to the Mayo Clinic at Rochester, Minn., and we have not seen her since. I also was surprised to see the remarkable improvement that has occurred, the only evidence of the condition being the dry, scaly, thickened palms and a few follicular horny papules on the lateral surfaces of the neck.

MELANOMA WITH METASTASIS. Presented by DR. M. F. ENGMAN and DR. W. H. MOOK, St. Louis.

R. C., a white woman, stated that there had been a black spot on the sole of the right foot, smaller than a split pea, from birth. It gave her no trouble until about two years prior to presentation, when she noticed that it was about the size of a hazelnut. She paid no attention to it until about a year and a half before presentation, when the surface of the skin opened; since that time it had never healed.

The primary lesion was on the sole of the right foot. About a month before presentation, metastatic growths had appeared, one on the inner surface of the right thigh near Scarpa's triangle, one just above the right knee and one on the right side of the chest above the breast. The initial lesion was a lobulated, sharply defined tumor in the center of the right sole, about 1½ inches (3.77 cm.) in diameter, the borders of which were gyrate. It was almost jet black.

ACNE CONGLOBATA. Presented by DR. M. F. ENGMAN and DR. W. H. MOOK, St. Louis.

R. B., a white man, aged 28, stated that a sister and a brother had a similar condition of the skin. His eruption had begun eighteen years prior to presentation, as a "rising" on the bridge of the nose which later broke down, forming an ulcer. This lesion was present for about three years before other lesions appeared on the face and the hip. Gradually, the eruption spread over the body, omitting the feet and the palms. The patient received twenty-two injections of arsphenamine, with only moderate improvement.

The eruption was distributed over the entire body; the face, extremities and trunk. The lesions began as nodules, which broke down and discharged purulent

material, following which crusts formed. Some of the lesions healed with scar formation, and others continued to increase in size until huge crusts resulted. There were ulcers which varied from 1 to 7 cm. in diameter. The borders were slightly indurated, and the surface was covered with thick brown crusts which were bathed in purulent exudate. The scars were quite numerous and depressed, with serpiginous and circinate borders.

The Wassermann and Kahn reactions were negative.

A section of skin stained with hematoxylin and eosin showed intact epithelium, which in one place was thinned due to an inflammatory process in the corium and extending down through the subcutaneous tissue. The cellular exudate was made up of round cells, polymorphonuclears, considerable fibrin and some tissue detritus. There was no appreciable increase in vascularity; however, some of the vessels surrounding this area were thickened and showed a definite perivascular inflammation. Weigert's elastic tissue stain showed only an absence of elastic tissue fibers in the necrotic area.

DISCUSSION

DR. UDO J. WILE, Ann Arbor, Mich.: I wish to ask about the family history, as to whether it is hearsay or actually true that the brother and sister have the same condition.

DR. CLINTON W. LANE, St. Louis: We know that the sister has the same condition, as she was studied three years ago, and later was presented before this Society.

DR. M. F. ENGMAN, St. Louis: This patient was first presented three years ago. He and his sister both came from Mississippi. He was in Barnard Hospital for some time and then in the Barnes Hospital, and was examined thoroughly. He had a peculiar resistance to tuberculin, without any reaction. After the appearance of the article by Dr. Michelson, we began treating him for acne conglobata. When he left the hospital, the eruption was entirely healed, as was that of his sister. Since then he has had a recurrence.

DR. H. E. MICHELSON, Minneapolis: As you know, I have discussed a case which I believe to be typical acne conglobata. The patient presented shows a marked example of the condition. Nevertheless, after examining some of the newer lesions, I believe that this, too, is a case of acne conglobata, as described by Lang. Our patient improved with scrupulous cleanliness, colloidal baths and the intravenous use of an autogenous vaccine. We felt that many of the lesions were the result of auto-inoculation. It is well to keep in mind that Oppenheim and some of his assistants have reported a tuberculous change taking place at the periphery of the lesions of acne conglobata. We have not observed our patient long enough to rule out such a possibility.

DR. S. E. SWEITZER, Minneapolis: I saw Dr. Michelson's case and watched it during his treatment. I think that it would be well for Dr. Michelson to tell us how he obtained his result, as this patient certainly needs help.

DR. UDO J. WILE, Ann Arbor, Mich.: It seems to me that there is something in the history that we cannot neglect. Three members in one family are affected, one sister and a brother of the patient presented, or at least one sister has the condition and one brother is alleged to have it. That fact speaks for a congenital dystrophic change, perhaps a defect in the skin analogous to the congenital conditions that react to mild insults, such as epidermolysis plus a tissue extremely sensitive to infection. If this condition is acne conglobata, then that disease has been poorly named. The disease does not occur in the same region as acne. I think that there were confluent comedones in Dr. Michelson's case. I do not think that this case is the same as that described last year by Dr. Michelson as acne conglobata. I do not know what the condition is, but I think that if the other members of the family have it, we are dealing with a hereditary change based on dystrophy of the skin.

DR. M. F. ENGMAN, St. Louis: When we first saw the patient, the condition looked very much like syphilis, and we carried out many Wassermann tests. The patient remained in the hospital for several months, and the condition cleared up under dietary control and other methods of treatment.

A CASE FOR DIAGNOSIS (TUBERCULOSIS OF THE SKIN? SARCOID?). Presented by DR. HENRY C. SHAW, St. Louis.

W. S., a Negro, aged 43, from the Barnard Free Skin and Cancer Hospital, from the service of Dr. Engman and Dr. Mook, stated that a disorder of the skin had begun in September, 1926, as papules on the eyelids, ears, nose and chin, which coalesced to form large nodular masses. In the course of a few months similar lesions appeared on the trunk and limbs, coalescing to form slightly indurated, nodular patches varying in size from 1 to 5 cm. Repeated examination of sections of the skin and nasal smears failed to reveal Hansen bacilli. The Wassermann and Kahn reactions were 4 plus, and the patient was given antisyphilitic treatment, but disappeared from the clinic and was not seen again until February, 1930. After three weekly injections of arsphenamine, an exfoliative dermatitis developed, and during the course of this trouble, the cutaneous lesions for which he was being observed disappeared entirely. Shortly after the exfoliation cleared, the original lesions began to reappear, and in the course of a few weeks developed to about the size as presented. After two injections of mercury salicylate, he again complained of dryness and scaliness of the palms, and there was again an improvement in the original disease. All treatment was discontinued until thirteen months before presentation, when he was given small doses of bismuth; he had shown practically no change, although he said that he felt much better.

Papular lesions studded the ears and were seen along the margins of the upper and lower eyelids, the nose, upper lip, temples, cheeks and chin. Conglomerate, nodular lesions were present on the neck, shoulders, trunk and limbs. The lesions were of different types, but were apparently variations of the same process. The early lesions were angular papules, the size of a pinhead, with a faint yellow tinge. They coalesced to form larger, irregular, nodule-like, granulomatous tumors; the papular element was present at the periphery of the larger lesion.

The Wassermann and Kahn reactions were 4 plus. Nasal smears were negative.

Biopsy showed a moderate hyperkeratosis with numerous air spaces between the lamellae. There were slight thickening of the rete pegs and diffuse cellular infiltration throughout the entire corium; in the reticular portion there were numerous walled off, tubercle-like bodies. These bodies were apparently encapsulated, the wall being formed of two or three layers of connective tissue cells. The inner portion of the tubercle had loose connective tissue meshwork that contained numerous fibroblasts, plasma cells and lymphocytes. There was also considerable infiltration about the blood vessels of the deeper portion of the corium, the cells being chiefly lymphocytes.

DISCUSSION

DR. H. N. COLE, Cleveland: Several years ago Klauder reported the case of a colored man with a peculiar nodular eruption on the skin which he termed a "sarcoid-like eruption of the skin." It ran quite a long course, then disappeared and recurred. Finally, at necropsy, tuberculosis of the lungs was found. In the last two years we have seen two colored men whose conditions were exact replicas of the case presented. We suspected syphilis, as was true in this instance, but antisyphilitic therapy gave no response. The histologic pictures were the same as in this case, resembling a sarcoid. We showed both of the patients at a meeting of the American Dermatological Association in Cleveland last spring. I think that this case is in the same group and that Klauder's designation of a sarcoid-like eruption of the skin is descriptive.

DR. UDO J. WILE, Ann Arbor, Mich.: I agree in part with Dr. Cole's remarks. I do not see any resemblance to sarcoid in this patient. Those of us who were

abroad last summer had an opportunity to see sarcoid tuberculosis in numbers that were amazing. Most of the lesions on the face were noninflammatory, few occurring elsewhere, and gave a characteristic histologic picture. I agree with Dr. Cole that the condition is tuberculosis of the skin, not lupus, lupus vulgaris or a tuberculid, but a disseminated form of tuberculosis of the skin. I do not think that this condition is rare, except that it was widely disseminated in this case. It would be rare for me, because I do not see any colored patients, but I have seen the condition in white patients. In all, there is a rather superficial type of tuberculosis with nodules in the corium, many of them being annular, which looks like a superficial syphilid, with lesions on the neck and trunk and with the histology of cutaneous tuberculosis. Tuberculosis is capable of enormous mutations in the skin, and the case presented is one of the many forms that it may take, but in my opinion is not sarcoid.

Dr. H. E. Michelson, Minneapolis: From the clinical and microscopic examinations, I think that this is a case of miliary nodular sarcoid. I feel that it is always important to make a diagnosis of a specific type of tuberculosis of the skin, if possible, because the prognosis is so variable. One must take into consideration the clinical, histologic and serologic elements and then, if possible, arrive at a conclusion.

Dr. Clark W. Finnerud, Chicago: Recently, we have had two similar cases one of which created a good deal of discussion at a meeting of the Chicago Dermatological Society. One case occurred in a Negro, the other in a Filipino. In each instance, the diagnosis rested between syphilis, leprosy and tuberculosis. After a time, we definitely ruled out every condition except tuberculosis. Extensive work was done in staining for organisms, and various methods were employed, but we were never able to demonstrate the lepra bacillus. In each case the histologic picture was much more characteristic of sarcoid than that in the case presented. In both of the former cases there was no histologic evidence of necrosis. I feel that these cases are instances of a tuberculid, that is, closely related to sarcoid, but not definitely sarcoid.

Dr. M. H. Ebert, Chicago: I was much interested in this case, because four days ago I saw a colored woman in the clinic who presented lesions on the face practically identical with those of the patient shown. She also had lesions on the trunk and extremities which were deep, subcutaneous nodules, arranged in circles and irregular groups. There was a history of the condition having been present for two years without ulceration. There was also a history of antisyphilitic treatment in two clinics, without marked improvement in the lesions. In that case I thought that the lesions on the trunk were of the Darier-Roussy type of sarcoid. I believe that the case presented also is one of sarcoid.

Case for Diagnosis (Arsenical Eruption?). Presented by Dr. Henry C. Shaw, St. Louis.

A. L., a white woman, aged 20, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, had had measles at 7, influenza at 17 and chickenpox at 18 years of age. The present disorder had begun on the legs five years prior to presentation, gradually spreading all over the body and limbs. The patient was first seen in the clinic in April, 1930, and was given a high caloric and high vitamin diet, with progressive improvement in the skin and general condition.

The entire skin, except that of the face, was involved. The scalp was dry, and there was some exfoliation. The hair was dry and lusterless. The skin of the trunk and limbs was covered here and there with an eruption which was in large groups and patches. The primary lesion was a hyperkeratotic, somewhat conical papule; some of the papules had run together to form plaques. Some of the papules were hyperkeratotic and horny; others had involuted, leaving small pig-

mented spots, and there was hyperpigmentation in patches on the body, notably about the gluteal folds. The toe-nails were dystrophic, and all of the finger-nails excepting two were absent. There was a verrucose lesion on the lower lip.

The Wassermann and Kahn reactions were negative. The urine was normal. Examination of the blood showed: May 6, 1930: hemoglobin, 45 per cent; red cells, 4,170,000; white cells, 13,750; smear, negative; August 1: hemoglobin, 70 per cent; red cells, 4,510,000; white cells, 11,150; smear, negative. The stool was normal. Nothing abnormal was cultivated from the skin, stool or mouth.

Biopsy showed a mild hyperkeratosis and moderate thickening of the rete; there was cellular infiltration in the corium and to some extent about the vessels; the cells consisted of lymphocytes, leukocytes, young connective tissue cells and an occasional mast cell.

DISCUSSION

Dr. S. E. Sweitzer, Minneapolis: My impression of the patient was that she showed evidences of arsenical damage. She had groups of verrucose lesions in the palm and hyperkeratosis. What she had in the first place I am unwilling to say, but I think that a great deal of her present eruption is due to arsenic. She gave a history of having taken something over a long period.

Dr. Clinton W. Lane, St. Louis: We have not given the patient arsenic, and according to the history, none was given by the family physician.

Dr. Karl G. Zwick, Cincinnati: In reference to the patient's general condition, I consider the possibility of a xeroderma pigmentosum. With this tentative diagnosis in mind, it seems but logical to look on the lesion on the lip as epitheliomatous.

Dr. S. Goldblatt, Cincinnati: Since the question of arsenic has come up, I suggest that it might be well to make a test on the blood, urine and skin for the determination of arsenic, and not to rely on the statement of the patient or her physician. Many drugs are contaminated with arsenic, sometimes in small and sometimes in large quantities. The Marsh test of the blood and urine, followed by an injection of sodium thiosulphate, will clear up the question.

Dr. Clinton W. Lane, St. Louis: The blood and urine were examined for arsenic, but none was found. This was not done, however, after an injection of sodium thiosulphate had been given.

Case for Diagnosis (Lupus Erythematosus?). Presented by Dr. M. F. Engman, Jr., St. Louis.

A. A. S., a white man, aged 64, stated that his cutaneous disorder had begun seven or eight years previously as a keratotic patch on the right side of the face, near the ear, which spread peripherally. Bullae and vesicles formed on the patch, crusted over and healed, leaving a slightly atrophic scar. The bullae did not have erythema around them unless they were traumatized. The lesion had spread during the four years the patient had been under observation, until at the time of presentation it involved the entire right side of the face, as far medially as the zygoma and laterally to the angle of the jaw and the ear. It was limited to the right side of the face.

The upper part of the lesion was a healed scar, quite superficial and covered with atrophic epithelium. The lower part of the lesion was more active, and in the lower two-thirds there were usually one or more bullae, the base of which might or might not be somewhat erythematous. There were usually crusts in this area, which was more sharply defined in the lower borders.

There had been no opportunity for hospitalization and study of this case. Biopsy was refused.

DISCUSSION

Dr. Udo J. Wile, Ann Arbor, Mich: I saw this case with Dr. Engman and suggested that it might be an unusual form of erythematous lupus. While it is

true that we do not frequently associate bullae with this form of lupus, I have seen cases of erythematous lupus which have begun acutely, a large number of lesions appearing in a short time, associated with an acute formation of blisters. The form, the atrophy, the sharp demarcation of the lesions and the peripheral spread at least suggest that this might be a tenable diagnosis.

DR. M. F. ENGMAN, St. Louis: We have followed up this patient for about three years. When I first saw the eruption, it was a small patch that looked like dyskeratosis, which seemed to heal, leaving a scar that one can see in the upper part of the lesion. Subsequently, bullae developed at the periphery of this scar, which dried and formed a crust. I have expected the case to develop into the type of disorder described by Senear, but nothing of that character has, as yet, taken place.

I have never seen bullae in chronic lupus erythematosus, but have seen them in the acute disseminated type.

DR. M. H. EBERT, Chicago: Has the sensory nervous system been investigated? I made a crude examination with a pin in the involved area and I found the sense of pain and light touch greatly diminished. I noticed that the patient had a vitiligo-like depigmentation on the arms, although the sensation, as I roughly tested it there, was not involved. I suggest that the disorder is possibly trophic.

DR. ELMORE B. TAUBER, Cincinnati: I suggest the diagnosis of dermatitis factitia.

DR. JOSEPH GRINDON, St. Louis: I wonder if the condition might have been kept up, as suggested by Dr. Tauber. The patient has never been under control in a hospital and may have used some application that has, at least in part, continued the condition.

DR. M. F. ENGMAN, St. Louis: We have never seen any ulceration in this case. I feel sure that there is no factitious element.

LUPUS ERYTHEMATOSUS. Presented by DR. HENRY C. SHAW, St. Louis.

B. M., a white woman, aged 22, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that her present illness had begun when she was 10 years of age as a redness of the chin and nose, which spread progressively to involve the entire nose, upper lip and chin. She was first observed in the clinic on June 16, 1930. Following exposure to the sun in July, plaques of persisting, scaly erythema developed on the dorsal surfaces of the forearms and arms, and had not shown a tendency to disappear.

The eruption was distributed over the chin, nose, upper lip, back of the neck and dorsa of the arms and forearms. The face showed scaly, erythematous lesions, with atrophic, finely wrinkled scarring in the center. The plaques on the forearms showed scaly, erythematous lesions and no scarring.

The urine was normal. Examination of the blood showed: hemoglobin, 85 per cent; red cells, 4,800,000; white cells, 6,300. The Wassermann and Kahn tests gave negative results. The basal metabolic rate was minus 8 per cent.

Biopsy showed that the epithelium was thickened; the malphigian layer was indistinct and flattened. Considerable edema of the corium and diffuse infiltration with round cells were present. The upper layers of the epithelium showed some parakeratosis. A number of cells had encysted nuclei.

LUPUS ERYTHEMATOSUS (DISCOID TYPE); TREATMENT WITH BISMUTH. Presented by DR. A. H. CONRAD, St. Louis.

T. H. G., a white man, aged 55, stated that his present condition had begun about ten years before presentation as a small red lesion on the left side of the nose and cheek. He came under Dr. Conrad's observation on Oct. 17, 1929, with a typical lupus erythematosus of the discoid type.

The lesions were distributed on the nose, left cheek and temple, the left side of the neck and the top of the scalp. The right side of the neck showed lesions from ½ to 2 inches (1.27 to 5 cm.) in diameter, which were dark red and slightly inflamed.

The patient received intramuscular injections of an aqueous solution of sodium bismuth tartrate at biweekly intervals. At the end of this time, the lesion on the temple had disappeared, while those on the right side of the neck showed great improvement and were fading. Some of the smaller lesions had disappeared. The lesions on the left cheek and on the scalp had disappeared; those on the left side of the neck were fading. He continued to take the intramuscular injections until March, 1930, when all of the lesions had entirely disappeared. Injections were given once a week until about June 21, when all treatment was stopped.

LUPUS ERYTHEMATOSUS: TREATMENT WITH BISMUTH. Presented by DR. R. S. WEISS, St. Louis.

E. K., a white man, aged 33, had been under observation and treatment since January, 1930, when he presented himself with a typical discoid type of lupus erythematosus covering the face and the front and sides of the neck, with some lesions on the lips.

He was given treatment with bismuth sodium tartrate, or its equivalent in bismuth sodium potassium tartrate, in a solution of 1.5 per cent. He was given a dose of 2 cc. three times a week, and he took his treatment fairly irregularly. During the early part of the year, he received about twenty injections, and in September and October, he was given another twenty.

Practically all of the lesions had cleared up, except for a tiny plaque on the nose and a few patches on the lips.

A photograph was presented.

DISCUSSION

DR. DAVID LIEBERTHAL, Chicago: The treatment for lupus erythematosus with bismuth is far simpler than treatment with gold preparations and is a safe method.

DR. R. S. WEISS, St. Louis: Apparently bismuth does not affect all cases, just as gold preparations do not. The salt used in the first of these cases was 1.5 per cent potassium tartrate with 25 per cent sucrose, a formula similar to that of Searle. The injections were given twice a week in doses of 2 cc. We have used this treatment in other cases and have had several failures, so do not get the impression that it is a sure cure for lupus erythematosus. In the first cases in which we used gold preparations, we had apparently marvelous results, but later we learned the serious effects that might occur. Bismuth seems to be a safe remedy, and we suggest that it be given a trial.

XERODERMA PIGMENTOSUM. Presented by DR. CLINTON W. LANE, St. Louis.

The mother and father of M. F., a white girl, aged 9, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, were second cousins. Four sisters of the patient were normal. Her disorder began when she was about 1½ years of age, as a redness of the exposed portion of body. There was no history of sunburn. There was a progressive freckling of these areas, with the development of warty growths on the face and arms, beginning at the age of 4. When brought to the hospital in February, 1930, she had numerous carcinomas on the face, hands, back, arms and legs. Many of them were excised with the cautery, and others were treated with radium. Since her discharge from the hospital in July, four additional carcinomas had developed on the face.

There were spots of pigmentation, varying in size from 1 to 5 mm. and in color from brown to black, surrounded by areas of atrophy, wrinkling and telangiectasis on the face, neck, chest, legs and over almost the entire back. There were numerous warty growths, and the patient had ectropion and photophobia.

Examination for hematoporphyrin gave negative results. Examination of the blood showed: hemoglobin, 95 per cent; red cells, 4,870,000; white cells, 10,700; smear, negative.

Biopsy of a large growth removed from the lip on Feb. 26, 1930, showed prickle cell carcinoma (grade II). The smaller growths showed cystic basal cell carcinoma with squamous changes.

NEVUS CARCINOMA? EPITHELIOMA? Presented by DR. HENRY C. SHAW, St. Louis.

L. K., a white woman, aged 78, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that her disorder had begun when she was 40 years of age, as a black spot, about the size of a pea, on the right cheek. Pigmentation spread from this one place to involve almost the entire upper portion of the right cheek. Two areas became hard and raised and, in 1925, were treated with 600 mg. of radium each. Both of the growths disappeared, but the pigmentation continued to spread and involved almost the entire right side of the face. Since admission to the clinic in 1925, she had had four additional treatments of 600 mg. of radium for the warty growths that had appeared. Following the treatment with radium, there had been deep pigmentation of the areas treated. On two occasions, sections were removed with the cautery.

The eruption involved the right side of the face under the eye and around the lateral canthus, extending back over the zygomatic process to the anterior auricular region. At the time of presentation, the areas that had been exposed to radium showed a pinkish-white, atrophic scar surrounded by deeply pigmented skin. There was no evidence of neoplastic growths.

On Feb. 14, 1928, biopsy showed prickle cell carcinoma with pigment. On March 28, 1929, the microscopic diagnosis of the tissue removed by cautery was nevus carcinoma.

DISCUSSION

DR. HOWARD J. PARKHURST, Toledo, Ohio: I thought that the condition was a pigmented nevus, even though it appeared at the age of 40.

DR. J. F. MADDEN, Toledo, Ohio: I think that as far as the microscopic section is concerned there is no evidence of carcinoma.

DR. JOSEPH GRINDON, St. Louis: I believe that this case should remind us of the fact that there is such a thing as carcinoma of the basal cell type, which, I think, Dr. Fred Wise, about a year ago, spoke of as erythematoid epithelioma, or carcinoma, which is probably the same condition as the Bowen precancerous dermatosis. This disease has sometimes been confused with Paget's lesion, but is distinct and separate. A true Paget's lesion begins in the milk ducts and not at the surface.

DR. J. F. MADDEN, Toledo, Ohio: It is rather hard for me to think of a carcinoma of thirty-eight years' duration that would not show malignant degeneration microscopically, and I do not believe that the microscopic section in this case shows evidence of carcinoma.

DR. F. E. SENEAR, Chicago: I do not agree with the diagnosis of mole in this case. I felt that the case belonged in the group that was described so thoroughly by Dubreuilh in 1912, as circumscribed precancerous melanosis. It is a senile type of lesion, and, as he showed, it consists of two parts, the pigmentary element and the cellular type; the latter may extend beyond the pigmented areas, so that the two do not necessarily go hand in hand. Carinomatous degeneration may occur even after a period of years.

DR. CLINTON W. LANE, St. Louis: This case has been under observation for years. The pigmented skin for the most part remains smooth and soft, but in some areas thickening occurs and the tissue becomes rough and slightly indurated, and occasionally definite nodules have appeared. It is in these indurated areas and

in the nodules that the microscope shows epithelial proliferation and invasion. The unusual feature is that whereas most lesions of the type are radioresistant, all of the nodules and thickened patches have regressed nicely under treatment of the surface with radium.

ACANTHOSIS NIGRICANS. Presented by DR. M. F. ENGMAN and DR. W. H. MOOK, St. Louis.

L. R., a white man, aged 38, gave a history of being gassed in France in 1918. His present disorder began on the eyelids and elbows when he was 5 years of age. Since he was gassed in France, he had been troubled with hoarseness. The cutaneous eruption had slowly spread during his lifetime, until other portions of the body were involved.

The eruption was distributed over the eyelids, the lips, the axillae, the flexors of the wrists and elbows, the dorsa of the fingers, the scapula region, the lumbar region, the upper half of the buttocks and between the folds, the popliteal spaces, the ankles and the dorsa of the toes of both feet. Examination of the nose and throat revealed similar lesions in the larynx and pharynx.

The lesions consisted of irregularly outlined and grouped, hypertrophic papillae, showing a marked exaggeration of the normal folds of the skin. They were grayish, with numerous areas of black pigmentation. As the lesion approached normal skin, it assumed the characteristics of the latter. The upper eyelids showed many small, pink to pearl colored, papillary projections, extending from the inner to the outer canthus.

A biopsy showed a typical picture of acanthosis nigricans.

DISCUSSION

DR. JOSEPH GRINDON, St. Louis: Is there any evidence of malignant condition of the viscera in this case?

DR. W. H. MOOK, St. Louis: This patient has been under observation for nine or ten years and has not made progress or a change since the first time we saw him. He presents an interesting feature, in that there are lesions in the pharynx and larynx of the same type as on the eyelids and in the axillae. Outside of that, the condition is a mild type of acanthosis nigricans.

DR. HOWARD J. PARKHURST, Toledo, Ohio: While the lesions on the eyelids and in the axillae seem to be those of acanthosis nigricans, I could observe no pigment on the elbows, and I wish to hear an explanation for this.

DR. W. H. GOECKERMAN, Rochester, Minn.: I have looked on acanthosis nigricans as a dyskeratotic disturbance of inherited type, and I could explain the hyperkeratotic lesions on the elbows as a part of the picture of acanthosis nigricans. I think that in this case there is not a disturbance due to a malignant condition, but a congenital disturbance of the chromaffinic system, or whatever it may be that is responsible for acanthosis nigricans.

CALCIFICATION OF THE CARTILAGE OF THE EARS. Presented by DR. R. S. WEISS, St. Louis.

Mrs. K. H., a white woman, aged 53, entered the Barnes Hospital for treatment for thyroid toxicosis. Her family and past histories were irrelevant.

Physical examination revealed a diffuse, enlarged, thyroid gland, exhibiting bruit and a thrill. The pulse rate was 110, and the blood pressure was 170 systolic and 60 diastolic.

The condition for which the patient was shown was present in both ears, the cartilages of which were stony hard and could not be bent. This hardening process extended into the external auditory meatus and had interfered with the outflow of cerumen. The right drum head, anterior superior quadrant, was remarkably thickened and calcified.

Roentgenograms showed calcification in the cartilages of the ears.

The urine was normal. The Kahn test gave negative results. Examination of the blood showed: sugar, 104 mg. per hundred cubic centimeters; calcium, 10.9 mg.; phosphorus, 4.7 mg.; red cells, 4,100,000; white cells, 5,150; hemoglobin, 85 per cent; Schilling differential count: segmented cells, 45 per cent; lymphocytes, 51 per cent; monocytes, 4 per cent. On admission, the basal metabolic rate was plus 32 per cent, and at the time of presentation was 11 per cent.

This case was presented through the courtesy of Dr. David Barr.

DISCUSSION

DR. R. S. WEISS, St. Louis: This case is rather extraordinary. I do not recall seeing anything like the calcification of the ear, and it extends into the cartilage lining the external auditory meatus.

DR. LEON BROMBERG, St. Louis: All of the metabolic studies in this case gave normal results. The calcium and phosphorus of the blood were both within normal limits. We at first suspected the presence of a parathyroid tumor, because of the work of Dr. Barr and Dr. Bulger, but when a subtotal thyroidectomy was performed, it was found that the parathyroid glands were normal. We are at a loss to understand the metastatic calcification in this patient, as far as the studies on the blood are concerned.

A CASE FOR DIAGNOSIS (MILIARY LUPOID? LICHEN PLANUS?). Presented by DR. R. S. WEISS, St. Louis.

Mrs. V. S., a white woman, aged 38, from the Jewish Hospital Dispensary, stated that a maternal aunt and uncle had died of tuberculosis. The patient first noticed an eruption on the right forearm in 1926; it had since slowly spread to both arms, the neck and the legs, and occasionally it itched. During the past three or four years, she had had attacks of nausea, vomiting, pains in the back of the neck, vertigo and hot flashes, and occasionally she had had to go to bed during the attack.

Examination in the endocrine clinic resulted in a diagnosis of original hyperpituitarism followed by hypopituitarism.

The lesions were situated on the neck anteriorly, in the decolletage area, the forearms and the lower third of the upper arms and on the legs. They were tiny, brownish-red, granulomatous papules, many apparently follicular. On pressure, the redness faded out of the lesions, leaving slightly yellowish deposits at their sites. On healing, the lesions left pigmented scarring with atrophy.

On the decolletage area, the lesions were not so numerous, but within this large patch were areas of atrophy with some capillary dilatation and consequent redness, giving the appearance from a short distance of a dermatitis caused by the roentgen rays.

The patient was thoroughly examined by the medical department of the Barnard Free Skin and Cancer Hospital, and the opinion was that she had a hypovarian state; roentgen examination of the chest suggested semiactive hilar and peribronchial infiltrations, probably tuberculous.

A biopsy of hematoxylin and eosin stained sections showed granulomatous papules in the cutis, with the epidermis markedly thinned and papules just beneath it.

The papules were composed of masses of small round cells and epithelioid cells, and an occasional giant cell could be found. One of the papules was located about a follicle that was hyperkeratotic and filled with a keratinized plug. There was slight inflammation about the sebaceous gland attached to the follicle, but the papule was to one side and showed more or less characteristic tuberculoid structure.

The urine was normal. The basal metabolic rate was minus 11 per cent. A Schilling differential count of the blood showed: stab cells, 7 per cent; segment cells, 59 per cent; lymphocytes, 25 per cent; eosinophils, 3 per cent, and monocytes, 6 per cent.

DISCUSSION

DR. J. F. MADDEN, Toledo, Ohio: I could not accept the diagnosis of miliary lupoid. I think that the condition is an involuting lichen planus, and that the microscopic picture is one of a bandlike infiltrate of lymphocytes in the papillary layer.

DR. M. F. ENGMAN, St. Louis: I have the same impression. I examined the section and am fairly satisfied that it shows nothing of a tuberculous nature.

DR. R. S. WEISS, St. Louis: When first seen this patient had lesions that bore no resemblance to those of lichen planus. She has been under observation for three or four years at varying intervals. When she was first seen, the lesions were small, elevated, circular papules, without angular outlines. They were not raised abruptly from the skin or violaceous and did not have flat tops, but were rather plain, oval papules which bore a striking resemblance to the nodules of lupus vulgaris. They were not exactly like these nodules, but were similar. Therefore, at first the lesions did not impress us as being those of lichen planus. They involuted and occasionally new lesions were seen. Dr. Mook studied the case with us, and we believe that it is a case of so-called miliary lupoid.

XANTHOMA TUBEROSUM MULTIPLEX. Presented by DR. A. H. CONRAD, St. Louis.

L. K., a white boy, aged 8, had had a cervical swelling after measles at the age of 3. At birth, a tumor about the size of a dime was noted in the gluteal crease; it had grown larger. Other lesions had been present for three or four years and were also increasing in size.

The lesions were roughly symmetrical, salmon-colored tumors. The most prominent ones were on the extensor surface of the forearms, on the abdomen to the left and below the umbilicus, and in the gluteal crease and on the flexor surface of both lower legs, especially at the joint of the ankle, were several very large lesions. Two large lesions behind both knees had been treated. There were also several small lesions on the upper eyelids. The individual lesions varied in size from a papule to fairly large tumors; some had coalesced to form the larger lesions. They were yellowish pink (salmon), and the lesion in the cleft showed many striations, with some dark pigmentary spots. The tumor was semisolid.

The urine was normal. Posteroanterior and lateral roentgenograms of both hands and wrists and the joints of the ankles did not show evidence of change in the bones. The epiphyseal development was within normal limits. A film of the chest showed a dense hilar shadow on either side, with nodular thickening of all the markings of the lungs.

The lesions back of the knees were treated by the injection of 2 cc. of ether, which caused a breaking down. Roentgen therapy was also applied to other lesions, without apparent change.

DISCUSSION

DR. R. S. WEISS, St. Louis: The treatment that seemed to be most effective in this case was the injection of ether into the lesions.

DR. A. H. CONRAD, St. Louis: The case was presented with the hope of securing some ideas for future treatment. We have tried roentgen therapy, without any apparent results. I injected ether into some of the lesions, which caused them to break down, with the result that you saw. Some of the lesions are located around the joints of the ankles and I hesitated to inject ether into that locality. I should appreciate suggestions for therapy.

DR. H. E. MICHELSON, Minneapolis: I suggest surgical excision in this case.

Dr. E. D. Crutchfield, San Antonio, Texas: I think that Dr. Michelson's suggestion is good. If surgical intervention is employed and a ketogenic diet is instituted, the patient will have a good chance of recovery.

A Case for Diagnosis (Syringocystadenoma? Steatoma?). Presented by Dr. Henry C. Shaw, St. Louis.

I. K., a colored woman, aged 25, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that her disorder had begun ten years prior to admission as small, hard lumps under the chin, which slowly spread downward over the back and the chest. At first the eruption did not cause symptoms, but intense pruritus, which was worse at night, began one year prior to presentation.

The lesions were distributed over the back, chest, neck, shoulders and arms, and to some extent on the abdomen. The papules varied in size from 1 to 5 mm.; they were not grouped and were firm and nodular.

A roentgenogram of the chest showed chronic, nontuberculous, perihilar inflammation.

Biopsy did not show hyperkeratosis; at the site of the papule, the rete was slightly thickened, with some vacuolization and intracellular edema. There was no increase in cellular infiltration in the corium; in the upper layers of the cutis, the collagen was more fragmented than normal. Throughout the corium there were numerous ducts, some with a single layer and some with a number of layers of epithelial cells, enclosing mucin-containing cells.

DISCUSSION

Dr. Howard J. Parkhurst, Toledo, Ohio: I thought that the case was one of syringocystadenoma.

Dr. Clark W. Finnerud, Chicago: I did not see the histologic sections, but I thought that the case, although slightly atypical, was probably one of syringocystadenoma. There should not be a question about the histologic appearance.

Dr. Henry C. Shaw, St. Louis: The histologic appearance was that of syringocystadenoma.

Dr. R. S. Weiss, St. Louis: In some of these cases there is remarkable improvement in the winter, the condition recurring with the onset of hot weather. We have observed this in several cases.

Dr. F. E. Senear, Chicago: I could not see any reason for a diagnosis of syringocystoma in this case. There were no microscopic changes to warrant this diagnosis; the tubules and cords made up of a more or less embryonal type of cell were not seen. There were cystic spaces in the derma surrounded by several layers of epidermis, and in two places you could trace where this was an extension directly from the epidermis, so I am inclined to think that the condition is simply a dilatation of a preexisting normal pilosebaceous apparatus, belonging perhaps in the group of steatomas rather than of syringocystadenomas, unless there are pathologic changes different from those shown.

Pemphigus Vulgaris. Presented by Dr. R. H. Davis, St. Louis.

W. A., a white man, aged 59, was admitted to the Barnard Skin and Cancer Hospital on Feb. 5, 1927, with an erythematobullous eruption. Three weeks later the eruption developed into true pemphigus vulgaris, the erythema disappearing.

Three weekly intravenous injections of 1 Gm. of tryparsamide were given, but the patient grew progressively worse and was almost moribund. The lesions were universal on the surface and in the mouth. The pulse rate was 110, and the temperature 104 F. The patient was given treatment with arsenic therapy and a thromboplastic proprietary preparation. Slow improvement began. Whisky was tried, but proved toxic, so its use was finally stopped. He had several severe relapses, but

improved steadily after each. He was discharged from the hospital about well on June 30, and had remained well since.

The number of red and white blood cells was normal; the urine was normal, and the Wassermann and Kahn tests gave negative results. A culture of fluid from a blister was negative. There was a slight leukocytosis, and the eosinophilia increased from 6 per cent on entrance to 29 per cent by March 26.

PEMPHIGUS VULGARIS. Presented by DR. R. H. DAVIS, St. Louis.

J. K., a white man, aged 46, stated that he had dermatitis herpetiformis which began about the middle of July, 1926. He was admitted to the Barnard Skin and Cancer Mospital on Nov. 13, 1926. He received prolonged arsenic medication with solution of potassium arsenite, which produced keratoses and small epitheliomas. The eruption was extremely pruritic.

He improved slowly until May 14, 1927, when he was readmitted to the hospital in a much worse condition. At this time, he had a universal bullous eruption, the lesions varying in size from 2 to 6 cm. The pruritus became less and was gone in five days. He then had a severe relapse on July 20. Injections of a solution of sodium arsenate and a thromboplastic proprietary preparation were begun. There was no change for ten days, and then iron cacodylate was used, and the patient improved somewhat. A severe general relapse occurred after a week. The patient was then given whisky and digitalis until August 28. The administration of arsenic was then stopped, and a marked relapse began. Solution of sodium arsenate was then used, and steady improvement began. New lesions did not appear until October 15. He was discharged from the hospital, the condition having again become like dermatitis herpetiformis. He was then treated with sodium arsenate and was finally discharged as clinically cured after one month.

Laboratory observations were negative.

POSTVACCINAL PEMPHIGUS. Presented by DR. R. H. DAVIS, St. Louis.

B. McI., a white boy, aged 10, was vaccinated in September, 1922, and an eruption appeared in December, as a pustule on the dorsum of the right hand. It became generalized, but sparse. The vaccination left a reddish scar. The pulse rate varied from 95 to 120 until apparent recovery on April 3, 1923.

The clotting time of the blood was normal. There was a leukocytosis in the early months.

Slow improvement and final recovery occurred after the administration of a thromboplastic proprietary preparation and arsenic therapy every other day.

POSTVACCINAL PEMPHIGUS. Presented by DR. R. H. DAVIS, St. Louis.

F. A., a white girl, aged 7, was vaccinated in February, 1922. A generalized eruption began before the vaccination healed, which was unusual.

There were bullae, some lesions always being present, and exacerbations occurred, accompanied by fever.

A blood count showed leukocytosis for months, but the clotting time was normal.

Coagulin and solution of potassium arsenite were used at first. There was gradual improvement and final recovery, but the treatment was changed from solution of potassium arsenite to a solution of sodium arsenate (phenol 1, sodium arsenate 1 and distilled water 50) doses of from 0.5 to 1 cc. being given subcutaneously. Two years were required for complete recovery.

SEPTIC PEMPHIGUS. Presented by DR. R. H. DAVIS, St. Louis.

E. J., a white girl, aged 10, was first seen on Jan. 9, 1924, with an erythematobullous eruption on the right knee, right leg, right thigh, left forearm and both wrists. The disease had begun four days earlier, following a superficial injury to

the right knee. The first diagnosis, which was made by an attending physician, was impetigo contagiosa; strong local applications had been used. The condition rapidly became worse within the next fifteen hours. The temperature was 99 F., and the pulse rate 85. Injections of sodium arsenate and of a thromboplastic proprietary preparation were begun at once.

The patient failed steadily for several days. The pulse rate rose to 140, and the temperature to 100 F. An internist was called in, and a poor prognosis was given, but he ordered the use of 1 tablet of digitan daily. The eruption and the accompanying foul odor continued the same, though the temperature returned to normal, and the pulse rate dropped to 90 in a few days. By this time, the increasing restlessness and nervousness had to be controlled with morphine, and the dosage of sodium arsenate had gradually been raised to 9 drops at each injection. The foul odor from the necrotic skin in the popliteal and cubital regions was almost overpowering to the patient and the attendants. The amount of solution of sodium arsenate used was reduced to 6 drops. The patient was given a nonprotein diet after the injection of solution of sodium arsenate had been stopped. The injections were recommenced, the dosage being 4 drops, which was all that the patient could tolerate. The use of bromide was discontinued after a flare-up of the lesions. Definite improvement began by January 31, and the injection of solution of sodium arsenate was stopped on February 19; the patient was entirely well by March 15. She was discharged from the hospital on April 10, and had remained clinically well for six years.

The urine did not contain albumin, but showed multiple granular casts. After the dose of solution of sodium arsenate was reduced to 4 drops, the condition of the urine improved, and in three days it was normal.

SEPTIC PEMPHIGUS. Presented by DR. R. H. DAVIS, St. Louis.

Mrs. B., a white woman, aged 37, said that in October, 1921, flat, shiny papules had appeared on the legs and feet, which were diagnosed as lichen planus. By November 14, the condition was general, and bullae were present in the mouth and on the body, legs, arms and lips.

The septic bullae were accompanied by attacks of fever. The pulse rate ranged from 100 to 120; the temperature, from 98 to 101.5 F. After February 6, the temperature was normal.

A thromboplastic proprietary preparation was used on alternate days after December 3 to February 8. Solution of potassium arsenite was used from December 3 to January 9. Afterward, arsenic therapy was used until February 1. Great improvement occurred coincidentally with the administration of arsenic therapy. The patient was discharged from the hospital as cured on February 17, but she required treatment for several months.

DISCUSSION

DR. CLARK W. FINNERUD, Chicago: I have no more respect for the diagnostic ability of any one I know than for that of Dr. Davis and Dr. Grindon, so far as the diagnosis of pemphigus is concerned, and I have much more respect for the diagnostic ability of others than for my own, so far as pemphigus is concerned, but I have never seen a case of pemphigus in a youth. A number of such cases have been presented here and at the previous meeting of this society as apparently "cured" by one means or another. I merely wish to express my doubt as to the diagnosis in these cases, as well as in the cases of pemphigus in adults who after any treatment remain "cured," as I feel sure that in at least some of these instances we shall find that we were not dealing with pemphigus.

I have seen true pemphigus in middle aged or older persons which cleared up for a period of weeks or months after the use of the Davis treatment or other treatments, but, in the instances in which the patients could be followed up, recurrences occurred. I might state, also, that at Cook County Hospital, at least, we do not get the good results in the treatment for pemphigus reported by others.

I have seen cases that closely resembled pemphigus in young and in older persons, in which complete recovery apparently took place, as well as similar conditions which proved fatal, but in these instances, without exception, the diagnosis either was not pemphigus or could not be given definitely as pemphigus. In other words, in my experience, the cases in which the patients have been "cured" have invariably been cases in which there was at least some doubt as to whether or not the condition was pemphigus. We have later been able to classify some of these cases rather definitely as multiform erythema, including erythema toxicum, dermatitis herpetiformis or some other disorder, and we have never been able accurately to classify some cases.

It is my belief that true pemphigus invariably proves fatal eventually, regardless of treatment, in cases in which death does not result from an intercurrent condition.

DR. R. H. DAVIS, St. Louis: In some instances the cases were followed up for many months and in others for years, and in all the tests that we made we found evidence of phemphigus. In at least three or four cases we sent the blood to Dr. Pels, and he returned the diagnosis of pemphigus. I only showed the patients to demonstrate that they do get well if they are treated long enough. I have found that most physicians and most patients do not have the patience to continue the treatment sufficiently long. It was discouraging at times, but if we kept up the treatment we were rewarded in most instances. Of course, we lost some patients, but we know that we have obtained good results in a large percentage of cases. I appreciate Dr. Finnerud's discussion, but I think that the diagnosis is correct. We have no absolute criterion to go by, but all of the physicians who saw the cases were agreed that they were pemphigus, and most of them expected to attend the funerals of most of the patients. I know that erythema multiforme is difficult to distinguish, and some of these cases were diagnosed as that disorder and some as other diseases, but they became eruptions of pemphigus. I cannot say that the eruptions always itch, for they do not. Two of the cases were postvaccinal, and the patients were presented. I do not mean to say that this is the only treatment for pemphigus, but in my hands it has proved the best to the present time, and I think that if we persist in it we will get recovery in many cases, probably in 75 per cent.

DR. DAVID LIEBERTHAL, Chicago: The view expressed by Dr. Finnerud, who has had numerous cases of pemphigus vulgaris under observation, in regard to the Davis method of treatment is shared by many dermatologists. The pessimism is caused by the fact that we expected from it a cure of the disease. Yet, we are under obligation to Dr. Davis in having proposed a method that will in some cases alleviate the suffering of the patients by bringing about improvement, though only temporarily, and will lighten our burden while attending them. I may add that the Davis treatment has proved efficacious in several other chronic vesicular and vesicobullous dermatoses to which some of my confrères in Chicago can testify. The treatment for pemphigus vulgaris as proposed by Dr. Grindon is also valuable, though we should not expect too much from it either. When I first studied dermatology and prepared for the practice of it, I learned from my teachers that arsenic should be "pushed" in suspected, as well as in frank, cases of pemphigus vulgaris in order to get results, and I have been using it ever since. The methods of both physicians mentioned employ arsenic mainly, though in organic compounds. Though neither method can assure a cure of the disease in question, we are thankful to them for increasing our armamentarium in combating this grave illness.

DR. JOSEPH GRINDON, St. Louis: Just a few words in regard to the Davis treatment. Whether we use the exact treatment originally proposed by Dr. Davis or some modifications of it, we do often get results. About six years ago the mortality from acute septic pemphigus was practically 100 per cent, but today a certain proportion of the patients recover, and when they are followed up over a period of years they are found to remain well. Dr. Finnerud raised the question

as to whether these are real cases of pemphigus or something else. I am willing to admit that some cases of erythema multiforme closely simulate pemphigus. Dr. Davis saw a case with me in which we agreed on a diagnosis of erythema multiforme bullosum, but later definite pemphigus developed and the patient died of that disease. Later I learned that he had had lesions in the mouth for one year. An early erroneous diagnosis will be corrected by later observation. The cases reported by me as acute pemphigus rapidly assumed an acute, septic course, the temperatures being as high as 103 or 104 F. There was a high eosinophil count, from 30 to as high as 40 per cent. In such cases, six of eight patients recovered with the use of a thromboplastic proprietary preparation, as proposed by Dr. R. H. Davis and the late Dr. W. D. Davis, with tryparsamide and have continued well. One of them has been under observation for five years.

I wish to endorse all that Dr. Davis said, and while I agree with Dr. Finnerud that it is possible to make a mistake in diagnosis between pemphigus and some other bullous condition, after having had the patients under observation for years, we are able to make a correct diagnosis.

Dr. Clark W. Finnerud, Chicago: I have seen two cases rather recently which closely resembled acute pemphigus, one even occurring in a butcher following an occupational injury, but both proved to be erythema bullosum and cleared up completely within a few weeks and have so remained. I felt rather positive at first of the diagnosis of pemphigus in one of them, but there was more question about the other.

Dr. M. F. Engman, St. Louis: Was there much difference between the bullous erythema and pemphigus?

Dr. Clark W. Finnerud, Chicago: In bullous erythema multiforme there is usually a low eosinophil count, and in pemphigus it is usually high. In the former disorder, the bullae commonly arise secondarily on bluish-red, edematous-looking plaques and are often intermingled with such papules and plaques.

Dr. M. F. Engman, St. Louis: In pemphigus there is an increased leukocyte count, and we have made this a point of differentiation; it is not so much the eosinophilia, but the leukocyte count.

Dr. R. H. Davis, St. Louis: I think that the question of age is of great importance. If the patients are over 60, there is not much chance, but under 60 there is a chance of three to one. As long as we have no certain test for pemphigus, Dr. Finnerud has as much right to his opinion as the rest of us. His criterion is that the patients die; mine, you might say, would be that they get well, but I think that age has much to do with it. I should like to hear what percentage of patients over 65 recover.

Lichen Planus. Presented by Dr. Henry C. Shaw, St. Louis.

E. S., a white woman, aged 41, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, had always been of a highly nervous temperament. Her present illness had begun four years prior to admission, as an eruption similar to that presented, which disappeared spontaneously in six months. The eruption recurred three years before presentation and cleared up after two injections of mercury. Six months previous to presentation there was a recurrence of deeply colored, papular lesions on the legs, thighs and wrists and a whitish reteform eruption on the lips.

Inspection revealed a whitish reteform eruption on the lips, without lesions in the mouth. Violaceous, angular papules, varying in size from 1 mm. to 1 cm., were seen on the extremities.

Sensitization Dermatitis. Presented by Dr. Henry C. Shaw, St. Louis.

H. F., a white boy, aged 13, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, gave a history of attacks of asthma. During early childhood, a papular eruption had developed on the legs which spread to

involve all the limbs and the neck. It had always been mildly pruritic, but at times was much worse, especially in hot weather. He improved moderately under simple hospitalization, but showed most rapid improvement after various foods to which he proved sensitive were removed from his diet. At the time of presentation he was practically symptom-free, and the eruption was better than he could ever recall.

The disorder was a vesicopapular dermatitis, practically generalized, most marked on the flexion surfaces of the arms and legs and around the neck.

The urine was normal. Examination of the blood showed: hemoglobin, 88 per cent; red cells, 5,230,000; white cells, 11,050; smear, negative.

DISCUSSION

DR. HOWARD J. PARKHURST, Toledo, Ohio: I wish to offer a diagnosis of dermatitis herpetiformis.

DR. JOSEPH GRINDON, St. Louis: I think that the condition is a sensitization dermatitis, with cutaneous reactions. We have tried to find to what these persons are sensitized, and sometimes we have found that they are sensitized to everything. For some time many of us have been coming to the conclusion that if we are going to do anything for these patients we will have to do it, not by putting them into glass cases and forbidding them long lists of contacts and foods, but by improving their resistance. What we heard today regarding the use of calcium was illuminating on this point. I suppose that we have all used calcium and that we were disappointed at first. We must learn to use it correctly, introducing into the circulation the proper amount or proportion of calcium ions. If there is a certain dilution of calcium ions in the blood, resistance will increase. If we increase the calcium ions over a certain point, resistance will be diminished. I believe that by following this plan we will accomplish more than by trying to exclude all possible harmful contacts and foods.

DR. CLARK W. FINNERUD, Chicago: I think that the diagnosis in this case is correct, that it is a sensitization dermatitis, but if it is not papular eczema, I should like to know what papular eczema is.

DR. E. D. CRUTCHFIELD, San Antonio, Texas: If we make a diagnosis of sensitization dermatitis, we might as well make a diagnosis of eczema. I thought that one of the papers presented, opened some lines of thought better than anything I have heard in years. I think that when we as dermatologists say that this patient has an allergic dermatitis we are begging the question. We might as well say that he has an eruption of the skin that we know nothing about. When we say that he has an allergic dermatitis that can be traced to this or that substance, we have something definite. We may say that it is not a food, but some kind of split protein product, and that when it gets into the gastro-intestinal tract various results are obtained. It is not a particular substance that the patients eat, but the split product, or the by-product, of digestion that is at the base of the trouble. I do not think that we can tell much by the tests on the skin. I have done many of them and have had poor results. I think that we really are learning, but that we can learn a great deal more.

LEUKODERMA. Presented by DR. JOSEPH GRINDON, St. Louis.

A full-blooded Negress presented a complete leukoderma, except for a few spots on one cheek.

DISCUSSION

DR. JOSEPH GRINDON, St. Louis: This case was presented merely as an extreme example of a disorder with which you are all familiar. There is nothing particular about it, except that the depigmentation is uniform except for a small patch on the cheek, with some smaller satellite lesions. Her father and mother were full-blooded Negroes.

Dr. H. J. Lavender, Cincinnati: We presented a similar case in Cincinnati a month ago. Our patient was not a pure Negro, but the three-quarter type. After a complete depigmentation that lasted for several years, he began to get a return of pigment.

Dr. Clark W. Finnerud, Chicago: About a year ago, Dr. Oliver and I had a Negress at the Cook County Hospital, who, except for some patches on the leg, became entirely depigmented. In another instance, a young white woman became completely depigmented within three years after marriage, with the exception of the hairy areas and two coin-sized patches in the interscapular region, which retained their pigment.

Melanotic Whitlow. Presented by Dr. M. F. Engman, Dr. W. H. Mook and Dr. M. F. Engman, Jr., St. Louis.

L. B., a white woman, aged 48, stated that her disorder had begun four years prior to presentation as a wide longitudinal streak, extending the length of the nail. After a time, the nail split and small tumors appeared at the base in the form of granulation tissue. The condition was thought to be an infection, and the two halves of the nail were removed two years before presentation. Since that time, there had been more or less inflammation, with seropus, and the nail never regrew. The condition was localized to the left great toe-nail.

At the time of presentation, the patient had a fungating tumor near the tip of the toe which had no covering of skin and was lobulated and hard. Around the base and outer surface of the nail there was a deep bluish-black pigmentation, as though it had been painted with silver nitrate.

DISCUSSION

Dr. E. D. Crutchfield, San Antonio, Texas: I should like to know whether pathologically there is such a thing as melanotic whitlow. I presented such a case before the pathologic society, and every one there said that there was no such condition. I made the point that these melanotic whitlows are never fatal; that they do not destroy life. This is a personal point with me, and I should like to know what Dr. Engman, Dr. Mook and some of the others think about it. Can we say to a patient, "You have a melanoma that is not likely to destroy your life?" Can we say to the pathologist, "There is a melanoma that is not likely to destroy life within a year," or are we on the wrong track? I know many patients who are still living, and either I made a wrong diagnosis or there is such a thing as a melanotic whitlow.

Dr. M. F. Engman, St. Louis: We made the diagnosis of melanotic whitlow after Hutchinson, who first described it. Hutchinson considered it an extremely malignant melanoma.

In our experience, melanoma is the most serious of all malignant growths. Ordinarily, it means death, but some do undergo involution. I remember a case that I had, in which a black mole that was irritated by the collar band was removed from the base of the neck. When I saw the patient, there was a wide dissemination over the body, with many lesions. I lost sight of the patient for two years, and then I happened to meet him on the street and he told me that the lesions had undergone involution. I requested him to come to the office, and on examination I did not find any lesions and he seemed perfectly healthy. I have not seen him since.

Dr. Joseph Grindon, St. Louis: Dr. Hardaway's case was not true melanoma, but the hemorrhagic sarcoma of Kaposi, which does not follow the course of true melanotic sarcoma. True melanoma is probably carcinoma. The alveolar structure is characteristic of that disease. Melanotic sarcoma, so-called, pursues a more malignant course than any condition we know. It commonly originates in a mole. Unna, Torök, Gilchrist and others have shown that the mole is not a mesodermic but an ectodermic structure from which carcinoma and not sarcoma develops, fitting in with the uniform mortality of that condition.

CONGENITAL JUVENILE XANTHOMATOSIS. Presented by DR. NORMAN TOBIAS, St. Louis.

R. P., a white girl, aged 1½ years, from St. Mary's Dispensary, had an eruption on the face, the upper part of the chest and the back, which was noticed a few days after birth. The lesions were slightly elevated, discrete, flat and rounded tumors, of a uniform yellow, most profuse on the face. The lower lids were also involved. There was no hereditary history and no history of jaundice. The lesions on the chest and back were light brown, pigmented macules. Irritation by rubbing did not produce a change in the lesions.

The laboratory report was: red blood cells, 4,476,000; white blood cells, 11,200; hemoglobin, 80 per cent; young polymorphonuclears, 5 per cent; old polymorphonuclears, 62 per cent; lymphocytes, 24 per cent; large monocytes, 9 per cent; nonprotein nitrogen, 55; blood sugar, 84; blood cholesterol, normal. The Wassermann reaction was negative. The urine was normal.

After three roentgen treatments, the lesions were beginning to show some involution. Injection of ether into the tumors produced sloughing, with disappearance of the lesion and depressed scarring. The patient was on a hypocholesterol diet.

DISCUSSION

DR. J. F. MADDEN, Toledo, Ohio: I suggest the diagnosis of urticaria pigmentosa. The child's mother gives the history of lesions appearing first as wheals and later as showing the pigmented areas. I suggest that a biopsy be made. The microscopic picture will establish the diagnosis.

DR. NORMAN TOBIAS, St. Louis: When the patient was first seen, she had only the pigmented, light brown, xanthochromia-like macules on the face. We have watched these lesions evolute into the light brown tumors. We have never been able to produce wheals, and there has not been eosinophilia. We were afraid to give the patient insulin because of her age. We have had her on a ketogenic diet without any results, but we did get some results from roentgen therapy.

LICHEN PLANUS WITH LESIONS ON THE VERMILION BORDER OF THE LIPS. Presented by DR. R. S. WEISS, St. Louis.

Mrs. Dora T., a white woman, aged 42, from the Jewish Hospital Dispensary, stated that her present illness had begun in September, 1930, with an attack of scabies. This cleared up rather rapidly on treatment, and another type of itching eruption developed in the middle of October.

Examination disclosed a tremendous eruption of lichen planus covering practically the entire skin below the neck with extensive lesions on the buccal mucosa and lesions on the vermilion border of the lips, especially the lower lip, which was involved chiefly on the outer two-thirds. A very fine papular eruption was noted on the lower lip, running together to form patches which were marked somewhat after the fashion of lichenification on the skin. The eruption was grayish-white.

On treatment with mercury with chalk, the generalized eruption had been rapidly improving, and the lesions of the mucous membranes had also definitely improved. The treatment was discontinued three weeks before presentation, and when last examined the lesions on the lips were still present, but were not quite so characteristic.

A CASE FOR DIAGNOSIS (LEUKEMIA CUTIS?). Presented by DR. R. H. DAVIS, St. Louis.

Mrs. H., a white woman, aged 50, was admitted to the hospital on Sept. 20, 1927, with a general itching and exfoliation. She was suspected of having mycosis fungoides, leukemia cutis, sensitization to protein and hypothyroidism. On admission, jaundice was present and persisted for some days. Attacks of chills and fever supervened at times. The microscopic section looked more like mycosis fungoides at this time. The suggestion was made that the trouble might eventuate into pityriasis rubra of Hebra, or leukemia.

The patient was discharged from the hospital unimproved on May 2, 1929. Since that time, she had gone from physician to physician, and was presented for suggestions as to diagnosis and treatment. The eruption was generalized; the lesions were red and scaly.

There was no leukocytosis until July 30, 1928, when it was 16,000, but it fell to 7,000 by November 28. At the time of presentation, the white blood count was 17,500; the hemoglobin was 56 per cent. The urine was normal. The differential count showed: stab cells, 2 per cent; segment cells, 31 per cent; eosinophils, 50 per cent; lymphocytes, 13 per cent; monocytes, 1 per cent, and myelocytes, 3 per cent.

Biopsy showed a profuse, general toxemia of the skin with infiltration around the blood vessels of the corium. There were no giant cells and few plasma cells.

Therapeutic measures had not helped. Injections of calcium chloride urea and protein failed.

DISCUSSION

DR. R. H. DAVIS, St. Louis: I wish to say that a good many physicians have seen this patient, and that she came back to me just ten days ago. The diagnosis of leukemia cutis was made before a blood count was attempted, because she showed a universal adenopathy. I advanced a diagnosis of leukemia cutis three years ago, before there was generalized adenopathy. The case was presented for diagnosis, but I still think that it may result in leukemia cutis. The condition started with the adenopathy, which led to the bodily changes. It should be remembered that the patient has been under observation for several years and is now in a poor mental condition. She has about given up hope, and I would appreciate any suggestions that would assist therapeutically and, of course, diagnostically.

CHANCROID. Presented by DR. CLINTON W. LANE, St. Louis.

B. T., a white man, aged 24, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, had had gonorrhea five years prior to presentation. His present trouble had begun three years later as a small vesicular lesion on the prepuce, about three weeks after sexual exposure. Within one week, the lesion ulcerated and the glands in the left groin began to swell and become painful. The penile lesion and the left groin were lanced by his local physician, and considerable purulent drainage was obtained from the groin, but the original lesion became ragged and undermined and began to enlarge. The groin was packed and healed in the course of the following three weeks. The penile lesion continued to enlarge, and three months after the onset, it was reported "positive for chancroid." The patient was given twelve injections of neoarsphenamine and twelve injections of mercury by his physician, but this failed to stop the progress of the ulcer. Following this, he was placed on a three months' course of antimony and potassium tartrate without any apparent effect on the course of the disease. For the following year, only local applications of various antiseptics were used, but none was of any value.

The patient was first seen in this hospital in July, 1930, when he presented a large, dirty, undermined ulcer on the body of the penis extending back to the pubes, and was in so much pain that he was unable to walk. Laboratory examinations gave negative results for Donovan bodies and the Ducrey bacillus. The Wassermann reaction was negative. He was given a trial course of antimony and potassium tartrate without effect, and was then given a course of injections of foreign protein (typhoid vaccine). Healthy granulation tissue appeared at the base; it was noted that the epithelium had begun to regenerate, and for the first time the patient was free from pain. Since that time he had used bismuth tribromphenate and phenylazo-α-α-diamino-pyridine hydrochloride locally, and he had received a high caloric and vitamin diet and general and local exposures to the quartz light.

At the time of presentation, there was a large, ragged, undermined ulcer, the base of which showed healthy granulation tissue, on the body of the penis, extending back to the pubis.

The urine was normal. Examination of the blood showed: July 13, 1930: hemoglobin, 98 per cent; red cells, 5,580,000; white cells, 13,350; smear, negative; August 24: hemoglobin, 90 per cent; red cells, 5,180,000; white cells, 16,650 September 29: hemoglobin, 94 per cent; red cells, 5,040,000; white cells, 14,500; smear, negative.

Smears and cultures were negative for the Ducrey bacillus and Donovan bodies. The Wassermann and Kahn reactions were negative.

Biopsy showed that the stratum corneum was missing for the most part, although a few strands were present; there was considerable acanthosis with vacuolization and intracellular and intercellular edema. The corium consisted of loose connective tissue, with numerous new blood and lymph channels and small blood vessels. There was cellular infiltration in the papillary and reticular portion of the cutis, most marked in the perivascular regions. The cells were chiefly leukocytes and lymphocytes.

DISCUSSION

DR. NORMAN TOBIAS, St. Louis: I think that this is one of the types of chancroid that ulcerate deeply and that would have been benefited by the early use of radium therapy.

DR. CLARK W. FINNERUD, Chicago: This case reminds me of one that I saw a year or so ago at the Cook County Hospital, which, though of considerable duration, proved to be a gangrenous balanitis, the result of infection with Vincent's symbiotic organism.

DR. DAVID LIEBERTHAL, Chicago: I have had several similar cases in which I encountered great difficulty in obtaining a result. In some cases I found the continuous bath an excellent remedy. I therefore suggest it in this case.

DR. JOSEPH GRINDON, St. Louis: I wish to back up what Dr. Lieberthal has just said. It was stated that the examination for the Ducrey bacillus gave negative results. It is not always easy to demonstrate this bacillus, and I think that the condition may be an infection with the Ducrey bacillus. I recall a case seen many years ago in a hospital in St. Louis. I directed that the patient be given a chair in the bathtub and that a spray be allowed to play continuously on the lesion. I believe that the continuous bath is the best remedy in these cases.

DR. CLINTON W. LANE, St. Louis: This is the second case of this type seen at the Barnard Skin and Cancer Hospital in the past eighteen months. Both patients came from Little Rock, Ark., the second being referred by the first, whose condition cleared up entirely. The first case was almost as severe as the one presented, but under treatment with the therapeutic lamp, mild antiseptics, soothing applications and injections of foreign protein, the infection cleared up. The surgical department then performed a plastic operation and skin graft, with a satisfactory result. So far this treatment has not been successful in the second case. I believe that it is a phagedenic chancroid with severe secondary infection. Therapeutic suggestions will be welcomed.

DR. J. F. MADDEN, Toledo, Ohio: Labadie reported similar cases from the University of Michigan several years ago, and all methods of therapy, including continuous baths, were used without favorable results. The only treatment that cured some of the patients was the use of the actual cautery.

LUPUS VULGARIS. Presented by DR. HENRY G. SHAW, St. Louis.

V. H., a colored woman, aged 29, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that her present illness had begun six weeks previously as a "pimple" on the tip of the nose, which gradually enlarged. Several months later a similar lesion appeared on either side of the bridge of the nose. The areas gradually coalesced. She had similar lesions

on the ears which disappeared spontaneously. This condition had progressed steadily, leaving a depressed scar. There was little change in the lesion during the course of two years' treatment with a gold preparation and gold sodium thiosulphate, but in the past two months there had been rapid improvement following the institution of treatment with gold chloride.

The eruption involved the entire anterior surface of the nose.

It presented an irregular, nodular surface, with some crusting of the lower portion and a depressed scar in the upper portion.

The Wassermann and Kahn reactions were negative.

SUPERFICIAL EPITHELIOMATOSIS. Presented by DR. CLINTON W. LANE, St. Louis.

R. M., a white man, aged 68, stated that six years previously he had noticed spots on the chest, abdomen and back, all of which appeared within one month. They had persisted ever since. During the first six months, they had increased in size, but had remained stationary for the past five and one-half years. The lesions did not cause symptoms, except that at times they became irritated from clothing and friction.

Five discrete lesions were observed, one over the sternum, one on the left side of the abdomen, one in the left inguinal region, one over the left scapula and one over the right scapula.

The lesions were irregular in contour. Most of them were flush with the surrounding normal skin, although those on the back appeared slightly depressed. The patch over the sternum was made up of pale and bright red papules the size of pinheads, which coalesced and interlaced. Clear areas of apparently normal skin were seen between the papules. The patch on the abdomen was bright red, being irritated from the clothing. The surface, for the most part, was smooth, with a few dry scales and crusts at the periphery. The lower two thirds of the patch in the inguinal region had healed spontaneously, leaving a pale, wrinkled skin. The upper border was comprised of shiny, glistening papules the size of a pinhead, with one approximately the size of a split pea. The patches on the scapulae were dull red and covered with dry crusts.

The Wassermann and Kahn reactions were negative.

The patient refused an operative procedure, and a biopsy could not be made.

DISCUSSION

DR. JOSEPH GRINDON, St. Louis: This case is typical of what has sometimes been miscalled Paget's disease. I do not believe that there is a Paget's disease that does not begin from the milk ducts. There is, as shown by Dr. Wise, an erythematoid type of basal cell epithelioma. I do not know what Bowen's dermatosis is, unless it is this condition, a plaque that looks like seborrheic eczema, but shows the picture of basal cell epithelioma.

DR. CLINTON W. LANE, St. Louis: This case was presented as one of superficial epitheliomatosis. The name was given to the condition by Dr. Hamilton Montgomery, in an excellent article that recently appeared in the ARCHIVES.

LICHEN PLANUS (LIMITED TO THE TONGUE AND THE BUCCAL MUCOUS MEMBRANE). Presented by DR. CLINTON W. LANE, St. Louis.

J. B., a white woman, aged 48, had always been "high strung" and of nervous temperament. Otherwise, she was in good health. There was no history of a recent shock or exciting experience.

Late in September, 1930, the patient had noticed a thickness of the tongue accompanied by a metallic taste. The surface of the tongue felt quite rough. A few days later she noticed white spots on the upper surface of the tongue. Two weeks prior to this, she had had an itchy rash on the arms, forearms, breasts and back, which lasted for only a few days and disappeared spontaneously. The condition was so evanescent that she did not consider it of any consequence.

The disorder was situated on the dorsum and sides of the tongue, in the anterior half, and on the inner surfaces of the cheeks, in the region where the molar teeth approximate. The tongue appeared reticulated, owing to the presence of numerous fine, white threads which interlaced. The lesions on the cheeks were minute, pearly white spots, which gave a mosaic-like appearance to the mucous membrane in this region.

The Wassermann and Kahn reactions were negative.

DISCUSSION

DR. CLARK W. FINNERUD, Chicago: I wish to ask whether any one knows of a satisfactory treatment for lichen planus of the tongue and buccal mucous membrane.

DR. DAVID LIEBERTHAL, Chicago: In 1907, I published a paper, one of the first in this country, on lichen planus of the oral mucosa, with the report of a case, in the *Journal of the American Medical Association*. In this case, there were also lesions on the vermilion border of the lower lip, on the nape of the neck and in one groin. Arsenical treatment brought about a decided improvement in a short time of observation. I have usually seen good results in other cases of lichen planus of the mucosa from intensive treatment with this drug.

PITYRIASIS ROSEA; VESICULAR. Presented by DR. R. S. WEISS, St. Louis.

V. B., a Negress, aged 21, from the clinic of Dr. Engman and Dr. Mook, twelve days previously had first noticed a spot on the left breast which followed an injury received while she was playing soccer. Five days later an eruption broke out on the body.

There was a patch 4 cm. in diameter on the lower portion of the right breast which was covered with a crust caused by painting with iodine. There were numerous oval, rosy red plaques, varying in size from 3 mm. to 1.5 cm., some covered with a slight scale, on the skin of the trunk anteriorly and posteriorly. There were a few scattered lesions on the face and neck, at the hair line, and also on the legs and thighs.

The extraordinary lesions were small plaques, the tops of which were capped with a clear vesicle. This capping was not caused by the application of iodine, as the patient had used it on only a few of the larger lesions on the skin of the trunk anteriorly.

PEMPHIGUS (?). Presented by DR. CLINTON W. LANE, St. Louis.

M. P., a white man, aged 64, had had erysipelas of the cheeks in April, 1929. He stated that he had not been well and that the face had been red since his recovery. Otherwise, he had always been in good health.

Large and small blisters had been appearing on the cheeks since 1927. They did not seem to be irritated or painful; they would rupture and dry up in about one week and then disappear without leaving scars. The blisters did not appear on any other portion of the body. In March, 1930, the left eye became severely inflamed, and this was accompanied by considerable "watering." The eye had never completely healed, although at the time of presentation it was better than it had been.

The eruption was limited to the cheeks, the sides of the nose and the left eye, and had been observed for the past twelve months. When present, the bullae were thin-walled and were not surrounded by an inflammatory zone. They ruptured easily, with the emission of clear fluid, and were replaced by thin crusts. They usually healed in from seven to ten days without leaving scars. Various forms of therapy were employed without much improvement until injections of

bismarsen were given. This treatment caused a slow but steady decrease in the frequency of appearance of bullae, and none had appeared since August.

The ophthalmologist's report was as follows: There was a generalized redness of the bulbar and palpebral conjunctiva. At 6 o'clock at the limbus, there was a gray coating over a round area about 2 mm. in diameter. On October 1, the conjunctiva showed evidence of marked drying. The retrotarsal fold of the lower lid showed that obliteration had begun. The conjunctiva was dry. The gray patch cleared.

The Wassermann and Kahn reactions were negative. Examination of the blood showed: red cells, 4,910,000; white cells, 8,100; hemoglobin, 95 per cent; differential count: lymphocytes, 26; large mononuclears, 3; polymorphonuclears, 64; eosinophils, 2, and transitionals, 5. The Pels test gave a reaction of 68 per cent.

DISCUSSION

DR. CLINTON W. LANE, St. Louis: This is the only case of pemphigus of the eye that I have seen. According to consultant ophthalmologists, this diagnosis is difficult to make without coexisting evidence of the disease on other portions of the body. The chief characteristic of pemphigus of the eye is the essential shrinkage of the conjunctiva, which is evidenced in this case by the beginning obliteration of the retrotarsal fold. The flaccid bullae were present on the face for three years, but they have disappeared completely under treatment with bismarsen. None has appeared for four months. The eye has not responded to treatment as well as have the lesions of the skin.

DR. CLARK W. FINNERUD, Chicago: Yesterday, Dr. Ormsby and I saw a boy with lesions of the eyes which were diagnosed by an ophthalmologist in Chicago as pemphigus. The lesions were limited to the eyes. We recalled two or three articles we had seen in the literature by ophthalmologists, in which they reported several cases of pemphigus of the eyes, and in those instances, so far as I recall, the lesions were limited to the eyes. I think that the condition they described is something other than pemphigus, for we see cases of pemphigus in which there are not lesions in the eyes, at least not without association with lesions elsewhere.

DR. M. H. EBERT, Chicago: I wish to suggest that the case may be one of herpes simplex, since it is known that this disorder sometimes involves the eye as well as other areas of the face; it may be a recurrent herpes simplex.

DR. CLINTON W. LANE, St. Louis: There were no vesicles. The lesions were discrete bullae which would dry up in about a week. I recently had a report from Dr. Pels on this case in which the blood serum was reported as 69 per cent, which he calls a borderline reading and not definitely toxic.

DR. JOSEPH GRINDON, St. Louis: Some cases that are reported as pemphigus of the eye are examples of essential shrinkage of the conjunctiva.

DR. R. S. WEISS, St. Louis: There seems to be some confusion among the ophthalmologists concerning these cases. I treated a patient for an ophthalmologist who sent her to me with a diagnosis of bullous keratitis. I suggested the use of intravenous injections of sodium iodide, as was brought out by Ruggles in the treatment for herpes zoster. The patient had had the condition for three years, with a tremendous disturbance of the eye. She had to be kept under the influence of sedatives and opiates and was in a pitiful state. She was given sixteen intravenous injections of sodium iodide and recovered completely. She has remained well for three or more months, and I suggest that Dr. Lane try these injections in his case.

DR. C. C. DENNIE, Kansas City, Mo.: I had a patient with a severe case of pemphigus who got along all right, but through some error he was given 2 drachms (7.8 Gm.) of sodium iodide intravenously, and in two days he was in bed.

DR. H. E. MICHELSON, Minneapolis: I think that we must recognize two types of pemphigus of the eyes. In one, bullae form as part of a generalized pemphigus,

and in the other a localized change takes place. I heard Brocq give a clinic on the latter type, and he stated that pemphigus of the eye always progresses to blindness.

A Case for Diagnosis (Scleroderma?). Presented by Dr. R. S. Weiss, St. Louis.

B. K., a white girl, aged 8, from the clinic of Dr. Engman and Dr. Mook, had a disorder of about four weeks' duration, which began with a pimple on the right wrist. Iodine was applied, and the papule did not rupture. A few days later, a band of nodules appeared, extending up the arm from the original site. During the past two weeks, this band had progressed up the outer side of the arm and over the shoulder to the angle of the scapula.

The general physical examination gave negative results. The eruption was distributed on the ulnar side of the right arm, extending on the outer side to the shoulder and the angle of the scapula. It was a raised, nodular and slightly indurated eruption in the form of a band about 4 cm. broad. Although some of the lesions were discrete, most of them coalesced to form irregular patches.

The Wassermann, Kahn and Kline tests gave negative results. The urine did not show abnormalities.

DISCUSSION

Dr. R. S. Weiss, St. Louis: I think that most of the physicians who saw this case considered it one of scleroderma. From the section I saw, I think it likely that it is scleroderma in the inflammatory stage.

Tularemia. Presented by Dr. D. P. Barr and Dr. H. L. Alexander, St. Louis.

A man, aged 33, had been admitted to the hospital three weeks before presentation, complaining of anorexia, headaches, backache and a tender lump under the left armpit which was gradually increasing in size, of two weeks' duration. He did not give a history of a lesion or infection at any place on the left hand or arm. He believed that he had had a slight fever throughout the illness. One week before the onset of the presenting complaints, he had suffered from a moderate diarrhea, which was controlled by medication. Two weeks before the onset of the diarrhea, he had helped skin some rabbits and prepare them for cooking; however, he had not inflicted any abrasion or injury of the skin.

On admission, the only abnormal physical finding was the enlarged left axillary node, which was the size of a hen's egg, slightly tender and not fluctuant.

The urine was essentially normal. The white blood cells numbered 7,500, with a differential count of 45 lymphocytes, 25 per cent segmented cells, 24 per cent stab cells and 1 per cent juvenile cells. The temperature was 38 C. (100.4 F.); the pulse, 90. An agglutination test of the blood with *B. tularense* was positive in a dilution of 1:40; one week later it was positive in a dilution of 1:320. Blood cultures had been negative.

He had been comfortable during most of his stay in the hospital. He had had a slightly irregular fever, which was rarely above 38 C. (100.4 F.); for the past week, it had remained at an almost normal level.

DISCUSSION

Dr. R. S. Weiss, St. Louis: Tularemia is an interesting disease. I saw a patient last week whose condition was diagnosed as sporotrichosis; a week later it was discovered that the condition was tularemia. There were lesions running up the arm in sporotrichoid arrangement, and it was somewhat disconcerting to discover the error. This sporotrichoid type has been described by one of the assistants of Dr. Francis in Washington.

DERMATITIS MEDICAMENTOSA (PHENOLPHTHALEIN). Presented by DR. R. S. WEISS, St. Louis.

Mrs. M. R., a white woman, aged 55, from the clinic of Dr. Engman and Dr. Mook, stated that her family and past histories were irrelevant, except for the fact that in June, 1927, and in October, 1930, she had had attacks similar to the present one.

Her present attack had begun two weeks previously with blisters on the feet and an eruption on the trunk and limbs which increased in intensity.

The patient presented an eruption of discrete and confluent, reddish-brown patches which were fairly sharply circumscribed, with a tendency to clear in the center, forming a sort of mosaic appearance. The lesions were located on the left lower eyelid, the anterior surface of the neck, the sternal area, the back, sacral area and buttocks, the posterior aspect of the thighs, both legs and soles and the forearms, chiefly the flexor surfaces, and were diffusely scattered over the backs of the hands. The lesions were entirely macular, although there was evidence of a previous formation of bullae on the feet.

The patient gave a history of having taken various pills for constipation, but she did not know what kind.

DISCUSSION

DR. H. E. MICHELSON, Minneapolis: I recently had the opportunity to study microscopically the skin of a patient with an eruption caused by phenolphthalein and was amazed to find that the picture did not resemble the pathologic changes of erythema multiforme, but was more like those seen in dermatitis caused by arsphenamine. The effect of the phenolphthalein seems to be particularly on the epidermis.

DR. C. C. DENNIE, Kansas City, Mo.: I wish to call attention to the fact that antipyrine will produce a lesion identical with that produced by phenolphthalein.

ERYTHEMA AB IGNE: LICHEN PLANUS. Presented by DR. R. S. WEISS, St. Louis.

C. E., a Negress, aged 24, from the clinic of Dr. Engman and Dr. Mook, stated that her cutaneous disorder had begun with a rash on the abdomen in April, 1930, which had spread and grown worse, and for the past three weeks she had noticed its appearance on the arms and legs.

The lesions were distributed on the flexor surfaces of the left forearm, on the abdomen below the umbilicus and on the sacral region; there were also a few patches of lesions above the knees.

The primary lesion was a papule, 0.25 mm. in diameter, with angular outlines and a shining flat top. In places the papules ran together to form plaques. A whitish plaque was seen on the left buccal mucous membrane. Another condition was seen on the legs below the knees, the skin of which was covered with mosaic pigmentation.

DISCUSSION

DR. JOSEPH GRINDON, St. Louis: I think that the worst case of lichen planus I ever saw was in a colored woman in whom the lesions had coalesced into one huge plaque on the back.

MYCOSIS FUNGOIDES. Presented by DR. HENRY G. SHAW, St. Louis.

M. J., a white woman, aged 58, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, had had a goiter for many years, with no symptoms except pressure. Her cutaneous disorder had begun four years before presentation, with itching and burning of the skin and a patchy redness, especially on the arms and legs. This condition was worse when she became warm and was intermittent for about two years. About two years prior to pres-

entation, many oval, annular, red and scaly plaques developed on the trunk and limbs. During the next six months, the lesions enlarged and became raised above the surrounding skin, and some of them ulcerated. She presented herself at the hospital eighteen months prior to presentation, at which time there were numerous red plaques varying in size from 2 to 10 cm.; some were covered with yellowish greasy scales, and the smaller ones, especially those on the legs, were ulcerated and exuding. The ulcerated lesions were treated with the roentgen rays, and there was rapid regression. Antimony and potassium tartrate was then given in tolerance doses three times a week for one month. On Aug. 30, 1929, a subtotal thyroidectomy was performed, with an uneventful postoperative course. Since that time, the patient had remained under observation and had received three additional courses of treatment with antimony and potassium tartrate, and one course of ten injections of foreign protein. While the progress of the disease was held stationary, there had been no improvement, and in August, 1930, systematic treatment with filtered doses of roentgen rays was instituted, with marked improvement.

The eruption was generalized, but was worse on the limbs and in the folds. The lesions were red, raised plaques; the flatter ones were covered with scales, and in the folds there were some fissures.

The urine was normal. Examination of the blood on Aug. 13, 1930, showed: hemoglobin, 85 per cent; red cells, 4,600,000; white cells, 13,500; differential (Schilling) count: eosinophils, 1 per cent; stab cells, 12 per cent; segmented cells, 30 per cent; lymphocytes, 51 per cent, and large mononuclears, 6 per cent; smear, negative. Examination on Oct. 14, 1930, showed: hemoglobin, 90 per cent; red cells, 4,910,000; white cells, 10,450; smear, negative.

Biopsy showed moderate acanthosis and cellular infiltration throughout the corium, most marked about the blood vessels and lymph spaces. There was also cellular infiltration about the hair follicles and sweat glands. The infiltrating cells were principally lymphocytes, but plasma cells and young connective tissue were also present.

Mycosis Fungoides. Presented by Dr. Henry C. Shaw, St. Louis.

E. D., a white woman, aged 53, from the Barnard Free Skin and Cancer Hospital, service of Dr. Engman and Dr. Mook, stated that her cutaneous disorder had begun fourteen years previously, as raised, red, scaly plaques on the left hip. The area enlarged slowly, and other similar spots appeared on various parts of the body, finally covering almost the entire body. She recalled that the condition was worse in the winter, with symptoms of severe pruritus and chilliness, but it never disappeared entirely in the summer. Some of the lesions had ulcerated, but had healed after the application of a soothing salve, leaving an area of hyperpigmentation. She had been observed in the clinic since September, 1929, and had received four courses of treatment with antimony and potassium tartrate and ten injections of foreign protein therapy identical to that given in the preceding case. While her condition showed slightly more improvement than that of the preceding case, it was decided to change the therapy, and since October, 1930, she had received filtered doses of the roentgen rays, with considerable improvement.

The eruption was generalized and consisted of red, slightly raised, scaly patches of varying sizes, with areas of hyperpigmentation.

The Wassermann and Kahn tests gave negative results. Examination of the blood showed: hemoglobin, 90 per cent; red cells, 4,970,000; white cells, 6,100; smear, negative; Schilling differential count: basophils, 1 per cent; eosinophils, 6 per cent; stab cells, 5 per cent; segmented cells, 36 per cent; lymphocytes, 44 per cent, and large mononuclears, 8 per cent.

Biopsy showed slight acanthosis. There was cellular infiltration about the hair follicles and blood vessels. The cells were chiefly leukocytes and lymphocytes, but there were also occasional epithelioid and plasma cells.

NEW ENGLAND DERMATOLOGICAL SOCIETY

Dec. 10, 1930

WALTER T. GARFIELD, M.D., *in the Chair*

LUPUS ERYTHEMATOSUS. Presented by DR. F. P. MCCARTHY.

A white man, aged 30, three months previously had been in an automobile accident and had received a "friction burn" on the lower part of the right leg which had not healed and had always shown a slight infiltration. The lesion was circular, about the size of a silver dollar, slightly crusted, pale red and sharply outlined. Biopsy was not performed, but the patient was given gold sodium thiosulphate, which resulted in considerable improvement. This case was presented as a question of trauma as a factor in the production of lupus erythematosus.

DISCUSSION

DR. F. P. MCCARTHY: I presented this case for discussion of the etiology. The patient was changing an automobile tire and a hit-and-run driver struck him; as a result, he lost his right leg and he has a so-called burn-trauma on the left leg that has never healed. Clinically, the case is strongly suggestive of lupus erythematosus. The patient was given one dose of gold sodium thiosulphate. The change occurring in a few days has been remarkable. I am interested in hearing discussion on lupus erythematosus following trauma. I think that it brings up medicolegal possibilities, and here is a case that seems to show a definite relationship.

DR. J. H. BLAISDELL: In this particular case, I should be rather loath to accept the diagnosis of lupus erythematosus and should suggest psoriasis. This is a definitely infiltrated process that is slowly growing. Its color is not inconsistent with psoriasis. The lesion has a smooth appearance today, because before he came here he carefully removed the scale with alcohol. If left alone, this lesion would be covered by a rapidly growing, thick scale. I took a stick to test the area, and the result was a reasonably characteristic scaling seen so often in psoriasis of the infiltrated type. Psoriasis follows traumatic injury. Whether it is the etiologic factor in this case is beside the point. It is true that the patient says that he has had no other lesion. On the other hand, in certain people psoriasis is limited to very small areas and has very little distribution. I do not see anything inconsistent with psoriasis in this case.

DR. F. P. MCCARTHY: While the patient has been under observation, there has never been scaling suggestive of psoriasis. There has not even been the granular scaling that goes with lupus erythematosus. The remarkable response to a gold compound is indicative. At one time this case was even considered as being persistent ringworm.

DR. J. L. GRUND: In regard to the response of psoriasis to treatment with gold compounds, cases have been recorded in which psoriasis has been aggravated by such treatment.

DR. W. J. MACDONALD: I believe with Dr. Blaisdell that psoriasis can start from an injury. Recently, in two cases psoriasis developed following automobile accidents. I took particular pains to inquire into the histories and found that the patients had never had the condition before.

DR. J. G. DOWNING: About six months ago, I treated a man who had previously had a severe abrasion of the lower part of the middle third of the tibia. After the lesion healed, a scaly patch developed for which he was given treatment at the clinic for about two months. He came to my office with a lesion similar to the one presented; I burned it severely with the Kromayer lamp, and the lesion disappeared after the healing process had finally finished. Then the patient returned to me at the end of the month with two typical psoriatic spots on both knees and a typical psoriatic scaling at the original site.

DR. F. P. MCCARTHY: I shall do a biopsy, but I am sure that it will not absolutely clear up the diagnosis.

GRANULOMA PYOGENICUM. Presented by DR. JOHN G. DOWNING.

A white girl, aged 23 months, had had infantile eczema on the face for the previous four months, which was marked when it was seen ten days prior to presentation, but which had responded readily to treatment, leaving a lesion on the outer side of the left eyebrow. Examination showed a pink, round, fungating lesion, 1.5 cm. in the long axis and 0.75 cm. in width, with an ulcerating center. Biopsies performed by Dr. F. B. Mallory showed a rapidly growing hemangioendothelioblastoma. There was no evidence of tuberculosis. This case was presented for the purpose of establishing a definite diagnosis because of the unusual fact that similar lesions appeared in twins.

DISCUSSION

DR. J. G. DOWNING: About two years ago, I showed the uncle whom you noticed with the twins as having an active case of acne-keloid. He had numerous sinuses over the back of the neck; many cultures were made, and finally a culture positive for tuberculosis was obtained. The aunt had been bedridden with tuberculosis for the previous five years. These children visit the aunt and uncle frequently, and the uncle is very fond of them and plays with them a good deal. When I first saw them, the first diagnosis that occurred to me was sarcoid. The lesion on the cheek of one of the twins occurred first; it has been present for more than four months. The lesion on the eyebrow disappeared two months ago, but since then it has increased in size. The lesions on the cheeks of both twins have been present for about four months. I first thought of sarcoid, but the condition did not seem to have all the clinical signs; then I thought of epithelioma, and finally reached the diagnosis of granuloma pyogenicum.

DR. J. G. SWARTZ: I think that in one of the twins — the one who has the lesion on the cheek — the condition could be diagnosed as a tuberculid, but in the one with the lupus-like lesion, it would be rather daring to offer a diagnosis as yet, though I think that the condition might be diagnosed as verrucous tuberculosis in an unusual location.

POLYCYTHEMIA VERA. CHRONIC URTICARIA. Presented by DR. F. P. MCCARTHY.

An Irish laborer, aged 55, had noticed the generalized appearance of small, red papular lesions which were somewhat pruritic four years previously. They had continued to appear and disappear spontaneously. During the year prior to presentation, there had been swelling of the fingers, toes, hands and arms, which appeared spontaneously and then cleared up. During the preceding two years, he had noticed redness of the face and blueness of the hands and lips.

The patient presented generalized erythematous papules, large wheals and a scaling pustular rash on right forearm. The tongue was bluish (cyanotic). The Kahn test gave negative results. The red cell count was 790,000; the white cell count, 10,600, and the hemoglobin, 140 per cent.

DISCUSSION

DR. E. L. OLIVER: I should suggest bleeding. I think that bleeding is a good treatment for urticaria. The withdrawal of half a pint at weekly intervals keeps such patients comfortable. The treatment may not have to be repeated in this case.

DR. W. T. GARFIELD: Would the patient have to be hospitalized?

DR. E. L. OLIVER: I do not think so.

DR. F. P. MCCARTHY: The patient is to be treated with x-rays. Later he will receive treatment that will lower the red count at least temporarily and that may take the place of bleeding.

PRIMARY SYPHILIS (SECOND ATTACK). Presented by DR. W. P. BOARDMAN.

A white man, aged 27, had had a hard chancre with a positive Wassermann reaction six years previously. He was given injections for about one year by a local physician; at the end of this treatment, there was a negative Wassermann reaction, and the patient had had no symptoms since. About three weeks previous to presentation, he had noticed a penile sore which was treated with boric acid and a yellow powder without benefit. During the past ten days, he had received one injection of neoarsphenamine and three doses of bismuth, and new nodules had appeared during that time. The lesions were healing.

Examination of the patient (November 29) showed red, rather hard, not tender nodules about 2 mm. in diameter; a few in which there were superficial erosions at the summit were arranged in an arc on the glans penis, corona and sulcus. No dorsal lymphatics were noted. The inguinal glands were small, deep-seated and not tender. Physical examination did not show other signs of syphilis. The Wassermann reaction was negative. Dark-field examination showed fairly numerous spirochetes.

DISCUSSION

DR. F. P. MCCARTHY: Is it possible to find an abundance of spirochetes in a tertiary lesion?

DR. W. P. BOARDMAN: Dr. T. J. Leary says that spirochetes are found in tertiary lesions, but that such instances are extremely rare. When I first saw the patient, I did a routine dark-field examination, and to my surprise I found that the spirochetes were very numerous. The absence of glandular enlargement interested me, and Dr. Leary suggested that this absence of adenopathy might be due to a partial immunity remaining from the first attack and that possibly, due to this slight immunity, the nodules were small and not as active as in the minor primary lesion.

MYCOSIS FUNGOIDES. LATENT SYPHILIS. Presented by DR. R. JACOBY.

In a colored woman, aged 41, "patches" had developed on the arms which were diagnosed as ringworm four and one-half years previously. The family history showed cardiovascular disease and goiter. The patient had had one miscarriage and two living children. One child was being treated for congenital syphilis. The patient presented generalized dry skin with variously sized, extremely itchy, infiltrated plaques scattered over the entire body. There were areas of alopecia on the scalp and eyebrows, considerable edema about the face, particularly the eyes, and bilateral inguinal adenopathy. The Kahn test gave positive results; the Hinton test, negative results. Biopsy showed mycosis fungoides. A blood count indicated secondary anemia. The weight was 72.7 Kg. (26 per cent overweight). The basal metabolism was —12. The blood pressure was 152 systolic and 90 diastolic. The tolerance for sugar was much above normal. The test with phthalein gave low normal results. Chemical analysis of the blood showed: nonprotein nitrogen, 26 mg.; urea nitrogen, 12 mg.; uric acid, 3.9 mg.; creatinine, 1.4 mg., and sugar, 99 mg. The cardiogram and the audiogram were normal. The volume of the lung was normal. The alveolar carbon dioxide was 42 mm.

The patient was given four doses of arsphenamine, which aggravated the condition of the skin. At the time of presentation, she was being treated with x-rays, and bismuth was being administered intramuscularly.

DISCUSSION

DR. R. JACOBY: Dr. Allen Winter Rowe of the Evans Memorial, where the tests for vital function were done, suggested the possibility of a bilobar pituitary failure. This brings up the question of whether this condition could play a part in the etiology of the disease.

DR. C. G. LANE: I think that in some of these cases one can use x-rays as a diagnostic factor. Mycosis fungoides ordinarily responds quickly to small doses

of x-rays, whereas if they are given in stimulating doses, the condition will not respond so readily. Small doses in eight or ten treatments will make a perceptible difference in the lesions early in the disease.

PSORIASIS OF THE NAILS. Presented by DR. W. P. BOARDMAN.

A white man, aged 20, had noticed changes in the finger nails and toe nails during the past three weeks. Examination showed subungual, dry thickening of the nails of both hands and feet. The nails showed striation and stippling in spots. There were no lesions on the body or the extremities. Mycelia were not found. The patient was presented because of the presence of lesions on the nails without other signs of disease.

MICROSPORON KERION. MICROSPORID. Presented by DR. W. P. BOARDMAN.

A white boy, aged 6, on Sept. 23, 1930, had noticed lesions on the scalp of three weeks' duration. There were several areas of alopecia with stubby hairs, gray scaling and collarets. On November 13, a typical kerion was present, with a generalized, symmetrical, papulovesicular eruption and lesions of lichen spinulosus over the buttocks.

At the time of presentation, there were smooth areas of alopecia on the scalp, with scaling areas on the arms and the trunk, representing sites of generalized eruption. On November 13 and 21, the hair on the scalp was positive for *Microsporon.* The lesions on the trunk, arms and thighs were negative for fungi. Cultures of the blood were negative. Hairs from the kerion lesion were positive for *Microsporon,* which was probably of the Lanosum type.

DISCUSSION

DR. W. T. GARFIELD: Today the patient does not show kerion formation, but I remember definitely that when I first saw the case, there was a large lesion measuring from 1¼ to 1½ inches (3.17 to 3.81 cm.) or more.

DR. J. H. SWARTZ: It is rather unusual to see a kerion produced by *Microsporon.* I have not come across any. I wondered whether the case was not primarily tinea, probably a secondary infection showing the kerion formation. If the lesion is due to *Microsporon,* I think that the case is worth reporting. I suggest a diagnosis of a small ringworm causing an edematous swelling.

DR. A. BLUMENFELD: This case is unusual, but the condition has been reported before. This morning I completed my survey of the literature and found that at least four reports of kerion due to *Microsporon* have been made. Finnerud of Chicago spoke before the British Dermatological Conference and demonstrated by pictures, biopsies and cultures a number of such cases. This case is interesting because the lesions were of two distinct types, the papular, soft, lichen spinulosus type that is found in epidermophytosis. In this case the blood count was normal. The cultures from various marginal lesions were negative, and at the height of activity fungi belonging to *Microsporon* were discovered. A week after the height of activity, activity was still present, and on fluorescence on the right leg, the fungi were still found.

DR. J. H. SWARTZ: Did you find the organism in the pus or only in the hairs?

DR. A. BLUMENFELD: Only in the hairs. The section was taken from lesions in which hairs protruded from pockets of pus, so necessarily some pus must have been present.

DR. J. H. SWARTZ: I think that the condition is unusual in kerion.

DR. F. P. MCCARTHY: Was a bacteriologic study made of the pus to establish the presence of staphylococci?

DR. A. BLUMENFELD: Yes, I have made some studies in the laboratory.

DR. J. L. GRUND: I should like to say a word about a case I have recently had; that of a patient with a severe tinea infection of the toes of one foot, which was present for about ten days. About ten days after it started, a marked, erythema multiforme-like rash broke out all over the body, which lasted about four days and then quieted down and disappeared.

LEUKOPLAKIA. Presented by DR. F. P. MCCARTHY.

A white man, aged 65, gave a history of an operation for carcinoma of the tongue in 1924. According to the history, the lesion was apparently superficial. Since 1926, the patient had been under treatment more or less constantly for leukoplakia involving the tongue and the floor of the mouth in relation to the operative scar. He had had five teeth extracted within the past few years, and he had had between twenty-five and thirty-five treatments with radium plaques in doses of 10 mg. during 1927, 1928, 1929 and 1930. The average dose was one-half hour, a rubber dam or a 0.1 mm. aluminum filter being used. In recent months, he had had several treatments with electrodesiccation.

The right margin of the tongue, including the tip, showed a second and third degree leukoplakia. The floor of the mouth on the right side showed similar involvement. Superficial ulcerated areas were also present as a result of treatment (electrodesiccation). The Wassermann reaction of the blood was negative.

DISCUSSION

DR. E. L. OLIVER: The case interested me greatly in relation to the question of operation. I think that in many cases reported as carcinoma of the tongue, operation discloses no such condition. I was told unofficially by a surgeon that of seventeen cases in which operations were performed for carcinoma of the tongue, only nine or ten showed evidence of carcinoma microscopically. The large majority of these cases are late syphilis of the tongue, and I doubt that in many cases one can distinguish whether carcinoma is present or whether the process is a late syphilitic one that has been rekindled. I saw one case that I felt was carcinoma of the tongue; the tongue was as hard as a board and ulcerated. It was admitted that the patient had syphilis, and on questioning it was found he had been under active treatment for six months. I committed myself that the condition was carcinoma. The tumor was excised, and no carcinoma was found. On further antisyphilitic treatment, the process cleared up, after a part of the tongue was lost. I do not believe that I shall ever make a positive diagnosis of carcinoma in these cases without the microscopic picture. Furthermore, concerning the treatment for leukoplakia, the patient was treated with radium, and I do not believe that the condition is better even now. I think, that it is well to leave it alone. There is always the likelihood that the process may become a carcinoma, and I do not believe that it is decreased very much by radium. I think that it may even be increased.

DR. F. P. MCCARTHY: I was glad to hear the reaction of Dr. Oliver. I am interested in the treatment for leukoplakia, and I am using radium less and less. This patient has received more than thirty doses of radium, scattered over a long period to be sure, and he has not improved, but has grown somewhat worse. However, I think that the use of the electrodesiccating needle is of great value. The reactions are less intense, and the purpose of removing the keratotic epithelial layer is accomplished. I agree that most cases of leukoplakia may well be left alone. I have come in contact with a woman over 60 years of age who has had three or four treatments with radium for superficial areas, and since then she has been extremely uncomfortable. I know definitely that some physicians see red when they see leukoplakia and assume that it is going to be malignant. Electrodesiccation can be given fairly frequently. The lesions heal promptly; one can treat them at least a week apart, preferably taking a new area.

CHRONIC LYMPHATIC LEUKEMIA. Presented by DR. A. W. CHEEVER.

A Jew, aged 58, had had weakness and chilly feelings in the legs and peculiar sensations in the epigastrium and the lower part of the abdomen five months previously. Coincidentally, a fine, fleeting, papular, itching rash that became excoriated and occasionally pustular appeared. Two months prior to presentation, an examination of the blood showed 250,000 white cells with 90 per cent lymphocytes. The tip of the tongue became sore and had continued intermittently to be so. Three weeks prior to presentation, the eruption became intensified in spite of therapy. A fine, red, papular eruption scattered irregularly and sparsely below the neck line, with few excoriations and rare pustules was noted. Several areas of urticarial wheals, measuring 7 by 2 cm., which would disappear in two hours and would reappear elsewhere, were also present.

Two urinalyses and examinations of the stool gave negative results. Repeated blood counts showed: red cells, 4,100,000; hemoglobin, 70 per cent; white cells, 330,000 and 360,000; differential count: lymphocytes, from 90 to 99 per cent, and lymphoblasts, from 1 to 6 per cent.

DISCUSSION

DR. B. APPEL: I saw the patient when he was first admitted to the Beth Israel Hospital, and at that time he had numerous areas of urticaria, particularly over the sites traumatized by scratching. There were large tracts of erythema, which were more numerous over the trunk and arms, and excoriations indicating an extremely severe pruritus. From what I know of the history, the patient had at first been sent, or went himself, from one physician to another, and had been treated for generalized pruritus, without result, of course. Finally, studies on the blood were made at the Boston Dispensary and disclosed leukemia; he shows now a general picture of leukemia.

DR. F. P. MCCARTHY: I believe that the dermatologist has it within his power to make the diagnosis of chronic leukemia more often than any other physician. The making of a smear of the blood as a routine procedure is indicated in most cases of generalized pruritus that one sees in middle aged or even in younger people.

PSORIASIS. MULTIPLE EPITHELIOMAS. Presented by DR. A. W. CHEEVER.

A white man, aged 57, a salesman, said that he had had psoriasis since childhood; a lesion around the left nipple for one year and epitheliomas for several years. Examination revealed large plaques of psoriasis distributed over the trunk. A lesion on the left nipple and an epitheliomatous condition of the upper part of the chest were noted. The patient stated that the psoriasis had varied somewhat, but had never been absent since childhood. The lesion had an oozing, palm-sized area surrounding the left nipple; it had appeared about a year previously. It had itched moderately, and had been very sensitive to all but the most soothing applications. It had healed recently, but was very red, and psoriasis was appearing in it. Epitheliomas had been growing extremely slowly; the time of their onset had not been noted, as the patient thought that they were psoriasis. The psoriatic condition, which occurred in large plaques was typical. The palm-sized lesion, which started as freely oozing, itching eczema, had gradually healed to smooth, bright erythema into which psoriasis had invaded. The epitheliomas consisted of areas about 0.25 cm. in diameter; they were reddish, depressed and atrophic and contained many irregular, scattered nodules which, if arranged in a ring, would be interpreted as the typical pearly border.

DISCUSSION

DR. F. P. MCCARTHY: I believe that the lesion on the left breast is epithelioma superimposed on an old area of psoriasis.

DR. F. S. BURNS: As I remember the history of the case, the area about the nipple began more as an accelerated dermatitis that was subsequently followed

by an induration of that area; surrounding that area, there was superficial atrophy and only subsequently, on the lower segment of the area, did the area of psoriasis encroach upward and finally merge with what is apparently an extensive dermatitis. I was struck by the possibility of its being Paget's disease or what is generally called Paget's disease, and by the fact that the psoriasis had merged with this area by encroachment. I think that this theory is further borne out by the tendency of numerous other lesions to form on the skin.

DR. A. W. CHEEVER: That was rather my idea, but I hesitated to make a diagnosis of Paget's disease because I have seen so few cases. I suppose the best procedure to follow is to have the involved area removed. Is it felt that it should be done at once, before a biopsy is made? Should the whole area be removed without a biopsy being made?

DR. F. P. MCCARTHY: I should perform a biopsy on the small lesion, which looks more like basal cell. On the question of complete removal of the breast, of course, there is little tissue in the male breast, and Paget's disease in a male breast is a rare condition. Feeling of the breast does not suggest that we are dealing with a neoplasm involving the breast. To begin with, Paget's disease is a simple neoplasm involving the tissue of the breast with a secondary discharge producing the dermatitis. There are two schools; one feels that the disease is a neoplasm of the skin with secondary dermatitis, and the other feels that it is a carcinoma of the duct with the presence of cells surrounding the nipple. I do not think that this case is one of Paget's disease, but that it is psoriasis, and that there is a localized, superimposed epithelioma somewhat distant from the region of the nipple.

DR. W. P. BOARDMAN: The patient has a gland in the left axilla which, if it has anything to do with the breast, would not indicate basal cell epithelioma. If the condition is carcinoma, the whole breast, and not merely a section for biopsy, ought to be removed.

DR. J. L. GRUND: I think that the most logical procedure would be to perform a biopsy, but to be ready to do an amputation of the whole tissue if necessary.

LUPUS ERYTHEMATOSUS? Presented by DR. W. P. BOARDMAN.

A white man, aged 25, had noticed a small, slightly itchy eruption two weeks previous to presentation, after squeezing blackheads from the right cheek. The patient presented a macular lesion on the right cheek which was about 1 cm. in diameter and sharply outlined, with minute scales, mostly follicular. There was a similar lesion on the left cheek which was much smaller. The point of presentation was the question of whether this case was one of very early lupus erythematosus.

DISCUSSION

DR. M. J. MORRISEY: I agree with the diagnosis of lupus erythematosus. A case that I saw was a perfect replica of this one, and it cleared up temporarily under local medication. There was a recurrence in six months, and the condition was a true, persistent lupus erythematosus.

DR. J. H. BLAISDELL: According to the patient, the duration was two or three weeks, and the attack of this eruption was preceded by the removal of blackheads from the face over a recurring period of time. In each case he remembers having removed blackheads from the place where the eruption appeared. I wonder whether this condition is anything more than a reaction after the removal of blackheads.

TUBERCULOSIS OF THE SKIN. Presented by DR. W. B. COHEN.

A white woman, aged 21, presented a violaceous patch, the size of a silver dollar, on the right leg, of four months' duration. The patch was made up of

violaceous, soft, painless nodules that tended to break down and ulcerate without discharge. The process was spreading. Treatment with ultraviolet radiation, gold sodium thiosulphate and a diet high in vitamins had been given. She had gained 5 pounds (2.3 Kg.) while under treatment. The Wassermann test of the blood gave negative results.

DISCUSSION

DR. F. S. BURNS: The lesion impressed me more as erythema induratum. The area is distinctly a violaceous, symmetrical process. There are multiple lesions, but most of them seem to be rather deep-seated and suggest the result of a deep necrosis. The one definite ulceration did not impress me as tuberculosis. The others were multiple areas of soft, flaky necrosis, which were much more superficial and seemed more like erythema induratum.

FAVUS. Presented by DR. W. B. COHEN.

A white girl, aged 11, presented a condition of the scalp of three years' duration. There were many areas of alopecia with atrophy and many typical sulphur yellow, pinhead-sized crusts pierced by hairs. Three other children in the family had the same condition.

Laboratory examination revealed *Achorion* of Schonlein.

DISCUSSION

DR. C. G. LANE: I saw a case of favus in which I had performed epilation several years previously and which had become reinfected afterward. Epilation had been performed four different times in that case, with intervals of at least six months between epilations. I remember that with a great deal of trepidation I did the third and fourth epilation, only because there seemed to be no outlook for the case, and, excepting where there was scarring in the areas, there was a good regrowth.

DR. J. L. GRUND: In connection with favus, a case was reviewed in the last number of the publication of the French Society of Dermatology. A patient with typical favus atrophy was treated by means of extracts; that method of treating patients with ringworm of the skin and scalp appears to be logical.

DR. F. P. MCCARTHY: I think that the delay in the growth and obtaining of the proper dosage of the suspension and the degree of heat necessary to devitalize have been the great problems in the making of fungus antigens. If the French have developed the technic to a place where even thirty doses are effective, it opens up a big field in the use of fungous vaccines, including *Epidermophyton*.

DERMATOPHYTID. Presented by DR. B. APPEL.

A white woman, aged 51, had been receiving intramuscular injections of bismuth for latent syphilis. About ten weeks previous to presentation, she first noticed an itchy eruption on the inner surface of the lower part of the left leg. A week or two later at another hospital, intravenous injections were made into the same leg for varicose veins.

A few weeks prior to the onset of the eruption, she had had an exacerbation of the itchy, scaly, moist lesions on the left foot. The lesions on the feet had been present for many years. Thirty years previously, she had had an acute, vesicular eruption over both hands, which was also associated with an exacerbation of the eruption on the feet. Along the inner aspect of the left leg and thigh and apparently running along the course of the internal saphenous vein, there were several round areas of scaly, red, fairly sharply outlined, inflammatory reactions; they were not raised, but were slightly infiltrated, being about from 1½ to 2 inches in diameter. Both feet showed typical moist, scaly, macerated lesions of dermatophytosis.

DISCUSSION

DR. B. APPEL: I think that this case is interesting from several standpoints, but principally along the lines of the article that Hazen recently published (Coincidences in Medicine, ARCH. DERMAT. & SYPH. **22**:305 [Aug.] 1930). He reported, a number of incidents which, if the course of events had been slightly different in relation to the chronology, might have been called one condition when they actually were another. I remember one case that might readily have been a burn following roentgen treatment if the appearance of the scar, etc., had been after the treatment rather than preceding it. Here we have a case in which the eruption apparently follows along the course of the vein of the left leg, into which a compound, probably quinine, was injected for the cicatrizing of the varicose vein. I feel reasonably sure that if the eruption had appeared after the injection into the vein, most of us would have connected these two incidents and would have called the condition dermatitis following the administration of quinine, or whatever the compound was. Another interesting feature is the possible relationship of the flare-up in the dermatophytosis that the patient had had on the feet about two weeks preceding the eruption. There is one more feature which perhaps has no direction connection with the particular dermatosis now present. In April, 1929, dermatitis and hemorrhagic lesions developed following the administration of neoarsphenamine, and the white count fell as low as 2,000 with 90 per cent lymphocytes. During the course of this condition, she had several stormy periods, in one of which mildly acute, atrophic changes of the liver occurred, and finally, after a long stay in the hospital, she recovered. I do not know whether she has a sensitivity to various toxins or whether there is a relation between the two incidents.

DR. C. G. LANE: I was interested in this case because several months ago I saw a woman with a marked exfoliated condition of both palms and soles following, or at least coincident with, the use of ethyl carbonate, which was employed to cicatrize definite varicose veins. She said that after the second or third injection, she began to have redness and itching of both palms and soles and that these symptoms quieted down before the next injection. The condition was timed on three or four subsequent injections. Finally, the surgeon who was giving the injections realized that the condition was flaring up each time, and he stopped the injections. When I saw the patient, there was an extensive, dull red thickening of both palms and considerable exfoliation, some at the wrist and some on the elbows. I thought that the condition was a definite reaction to the drug, which was introduced between the veins. So far as I have seen, that is the first case that has occurred. The other point that impressed me in connection with this case was with relation to the dermatophytosis. I do not believe that this condition can be called a lymphangitis, although the patches certainly follow definitely along the vein, or, possibly, along the course of the lymphatics. I have seen one patient with a lesion on the finger in which a definite fungus was found. There was a painless red and scaly streak extending up the finger to the back of the hand into and above the axilla, without tenderness along the lymphatics, but merely a little itching and tenderness, which gradually quieted down. I think that the condition may be a definite lymphangitis possibly due to an infection with fungus.

DR. J. H. SWARTZ: I do not believe that I can supply a definite diagnosis, but I am perfectly willing to rule out epidermatophytid, because there should be a definitely active phytosis. At the present time, examination of the feet reveals no active process. Furthermore, in epidermatophytosis the lesions are not so acute, and these also follow the distribution of the veins. This is an acute, red, inflammatory condition, with practically no active epidermatophytosis in the feet at the present time.

LUPUS ERYTHEMATOSUS? SARCOID? BASAL CELL EPITHELIOMAS? Presented by DR. J. H. SWARTZ.

A white man, aged 30, had had a condition for three months which had begun as a papule and enlarged. The color did not change, and the oldest lesion assumed

scales. On the right cheek there was a nickel-sized area of scaling and erythema with a papular border, the latter showing telangiectasia and a suggestion of pearliness; there was a lesion the size of a pea adjacent to it. The left cheek showed a semicircular lesion with the border definitely elevated and a suggestion of pearliness.

The Wassermann and Hinton tests gave negative results, and there was not sufficient time to make a biopsy.

DISCUSSION

DR. F. P. MCCARTHY: I suggest a diagnosis of lupus erythematosus. There were two lesions on the left cheek; one was more or less symmetrical with the large lesion on the right cheek. The age of the patient and other data were indications against the diagnosis of basal cell epitheliomas.

DR. J. H. SWARTZ: I first saw the patient about ten days ago. The picture has changed somewhat. When first seen, he showed more of a papular condition, and on stretching the skin one could see the little capillaries and also a suggestion of pearliness. I gave him potassium iodide, but stopped the treatment about two days ago because an iododerma began to develop. The papules were much flatter, and the suggestion of pearliness was not present as before. The fact that he showed improvement due to the potassium iodide made me wonder whether we are not dealing with a sarcoid. Papular lupus erythematosus is not very common. This eruption is a papular one.

DR. J. L. GRUND: At the present time, the lesion does not look papular, but nodular. The duration would be against epithelioma. There are no signs of induration, and the scaling indicates lupus erythematosus.

DR. C. G. LANE: When examined closely, the lesion on the left cheek showed four or five dome-shaped papules, which were close together, soft, rounded, fungous and almost pearly. I could not see how they fitted into the picture of the lesion on the right cheek, which was distinctly dry and scaly and at a distance suggested blastomycosis, but on closer examination did not appear to be that condition. If we did not know the duration, the lesion would suggest lupus vulgaris. The lesions were soft and not firm as one would expect in lupus erythematosus. I think that the lesions on the left cheek suggest a typical epithelioma more than anything else, but I still cannot agree that the lesions on the right cheek are the same condition.

LUPUS VULGARIS. Presented by DR. BERNARD APPEL.

A white woman, aged 32, said that the red spots on the forehead and the left ear had developed slowly during the past two years. She presented several small, sharply outlined lesions on the forehead, measuring about ½ to ¾ inches in diameter; they were red and slightly scaly, with a pitted granular surface. Over the external part of the left ear there was a similar larger area, the anterior border of which extended to the cheek and had several small, softer areas suggesting nodules.

Biopsy showed that in the lesion on the forehead the epidermis was rather thin and the papillary layer poorly developed. The skin was normal. The lesion on the anterior border of the ear showed a collection of tubercles in the corium. The epidermis was thin. The papillary layer was well developed. There was an infiltration of round cells and fibrosis with giant cells in the upper part of the corium. Clusters of typical tubercles with necrotic centers and mantles of lymphocytes, epithelioid cells and giant cells were seen. A diagnosis of typical lupus vulgaris was made.

DISCUSSION

DR. J. H. SWARTZ: I offer a diagnosis of seborrheic dermatitis. There is a definite seborrhea of the scalp, the typical hair line. I also saw the section

taken from the left ear for biopsy. There was only one lesion that suggested lupus erythematosus. If the condition were lupus vulgaris of one and a half years' duration, one would expect more destruction. There was practically no destruction. The scaling was the greasy scale that one sees in seborrheic dermatitis.

DR. F. S. BURNS: Judging from the nodule on the patient's right cheek and the statement that was made by one of the physicians who had seen the lesion before the specimen was excised from the left ear for biopsy. I can believe that the lesion on the left ear is a nodule of lupus vulgaris; I must be convinced from the demonstration by Dr. McCarthy of the microscopic picture, in spite of my skepticism. I also agree with Dr. Swartz' opinion that the patient has a generalized seborrhea and seborrheic dermatitis on the forehead. The specimen taken from the forehead for biopsy shows practically nothing but a negligible amount of keratosis, which is entirely consistent. I think that the patient has two diseases — lupus vulgaris and a generalized seborrheic dermatitis.

DR. A. W. CHEEVER: Another point in favor of the two diagnoses is that the areas on the forehead are improving definitely under treatment with sulphur ointment, and the area around the ear does not seem to be improving.

PSEUDOPELADE (BROCQ). Presented by DR. JOHN G. DOWNING.

A white man, aged 44, said that the condition had started while he was in military service, but was not treated until 1919, after he had left the service. He was treated at the Massachusetts General Hospital for two months in 1919. The condition started on the top of the head and gradually worked its way down. The hair began to fall out suddenly, and there had been a progressive loss of hair up to the time of presentation.

Examination showed considerable loss of hair throughout the scalp, more at the vertex, and spreading down over the regions of both temples and through the occiput. This condition was smooth and shiny and appeared moth-eaten, with cicatricial thinning and obliteration of the follicular openings. There were also occasional areas of atrophy. The hair was wiry, and at the base of each hair there was a small keratotic plug that extended up the hair about 1 mm. The hair was loose in its follicle and on removal showed considerable bulbar enlargement. The Wassermann reaction of the blood had been negative on five occasions.

HEMANGIOMA. Presented by DR. FRANCIS P. MCCARTHY.

A white boy, aged 13, gave a history of having had a "pimple" on the back for several months. There was no history of previous lesions. The patient presented a raised, raspberry-like tumor just over the right scapula; it was bluish to dark red and measured about 1 cm. in diameter.

DISCUSSION

DR. F. P. MCCARTHY: I am showing this case because of the question of etiology. There is no history of preexisting lesions, and the question arises whether we are dealing with an embryonic rest of vascular tissue stimulated by trauma to develop into a hemangioma later in life. The question of traumatic origin is based on the embryonic rest present in the skin, which is stimulated by trauma, provided there is a single lesion. When there are multiple lesions, the theory may still hold true of repeated trauma or trauma at different places with the embryonic rests multiplying and becoming distributed throughout the skin.

DR. F. S. BURNS: I favor the diagnosis of granuloma pyogenicum.

DETROIT DERMATOLOGICAL SOCIETY

H. J. PARKHURST, M.D., *Reporter*

Regular Meeting, Dec. 16, 1930

C. K. VALADE, M.D., *Presiding*

A CASE FOR DIAGNOSIS (GRANULOMA INGUINALE?). Presented by DR. L. W. SHAFFER.

F. S., a Negro, aged 47, a laborer, who said that he had not had venereal disease, had first noticed painful swelling and slight induration beneath the prepuce, with a slight discharge, in February, 1930. In June, the symptoms were more marked; a dorsal slit had been made, and a diagnosis of tuberculosis cutis was suggested. The infiltration had persisted, and at the time of presentation there was central ulceration on the glans. There was no inguinal lymphadenitis. The Wassermann reaction was weakly positive, and the histologic picture was more indicative of syphilis than of tuberculosis. The condition had failed to improve under moderately intensive antisyphilitic therapy, together with rest in bed, elevation and moist dressings of potassium permanganate. The Kromayer lamp was then employed, and antimony and potassium tartrate was administered intravenously, which was followed by 60 per cent improvement. The patient's wife had ulcers of the cervix and vagina, which gynecologists considered to be tuberculous.

DISCUSSION

DR. R. C. JAMIESON: I favor a diagnosis of granuloma inguinale in this case.

DR. O. M. GRUHZIT: The improvement under treatment with antimony and potassium tartrate favors a diagnosis of granuloma inguinale.

DR. H. J. PARKHURST: The undermined border suggests tuberculosis. The causative organisms of tuberculosis or granuloma inguinale might be sought in sections from the border of the lesion.

LICHEN NITIDUS. Presented by Dr. JOHN A. HOOKEY (by invitation).

Miss L. V., aged 25, had had frequent "colds," and roentgenographic observations suggested healed tuberculosis of the lungs. She presented an eruption of eighteen months' duration, which had first appeared on the right palm, and later on the flexure of the right wrist, the left palm, the left wrist, the left posterior axillary region, the extensors of the elbows, the angles of the mouth and the right flank, in the order mentioned. The lesions were mildly pruritic, discrete, uniformly small, round or angular, flat, shiny papules, of a distinct yellow. The palms and elbows showed slight psoriasiform scaling, with distinct individual lesions only at the border of the patches. Several lesions simulated tiny vesicles. The Wassermann reaction and the reaction to the Moro tests with tuberculin were negative. A specimen taken for biopsy was shown. There had been some improvement following eight intravenous injections of gold sodium thiosulphate.

DISCUSSION

DR. L. W. SHAFFER: The present clinical and histologic picture is not that of true lichen nitidus.

DR. G. H. BELOTE: In the original cases described by Pinkus, the sections showed a fairly typical granulomatous pathologic condition which was situated high in the corium. In the present case there is edema high in the papillary layer, and that is all.

PITYRIASIS ROSEA: CONGENITAL SYPHILIS. Presented by DR. W. G. SAUNDERS.

E. S., a Negro child, aged 11, presented a generalized papulosquamous eruption of five weeks' duration; the size of the lesions ranged from that of a pinhead to that of a dime. Some of the older lesions were annular, with scaling collarettes, and their long axes tended to follow the lines of cleavage of the skin. The face was involved, and the eruption was pruritic. No herald patch could be found.

The frontal and parietal bones were prominent. The hairline was irregular, the palate was highly arched, and the sternal end of the left clavicle was enlarged. There were two lower mulberry molars, and the incisors were of the Hutchinsonian type. A report of the Wassermann test had not been obtained at the time of the presentation.

LICHEN URTICATUS. Presented by DR. W. G. SAUNDERS.

R. L., a boy, aged 3, presented a pruritic eruption of small, excoriated papules, without grouping, on the forearms, palms, legs, soles and trunk, of three weeks' duration. They were most numerous on the forearms and legs, and they were sparse elsewhere. The early lesions had a urticarial appearance.

DISCUSSION

DR. L. W. SHAFFER: We must often look for scabies in such cases, but this case is true lichen urticatus.

DR. A. P. R. JAMES: I agree with the diagnosis. Tonsillectomy may prove beneficial.

DR. L W. SHAFFER: Such cases have an underlying constitutional background, and such treatment as the removal of infected tonsils may clear them up. There may be other etiologic factors. Nonspecific therapy seems worthy of a trial.

DR. A. E. SCHILLER: We see many of these cases and have difficulty in treating the patients. We have found treatment with viosterol and the ultraviolet rays most beneficial.

DR. H. J. PARKHURST: In the New York clinics there are many such cases. The patients usually improve when the general hygienic condition is bettered, antipruritic ointments are applied regularly and scratching is prevented.

TRICHOPHYTOSIS BARBAE. Presented by DR. H. L. KEIM.

G. W., a man, aged 45, a cook, with an impetiginous eruption on the chin, had been oberved six months previously. Following the use of a mercurial ointment, there had been some improvement in the condition, but six weeks before the time of presentation nodules had developed, and they had persisted. On the chin there were six crusted nodules ranging in size from that of a pea to that of a small coin. Removal of the crusts revealed many loose hairs and follicular pustules. The nodules were firm and painless. The large-spored ectothrix was demonstrated.

DISCUSSION

DR. G. H. BELOTE: At Ann Arbor, Mich., we often see this infection in farmers, and we almost always find their cattle infected with the same organism.

DR. H. J. PARKHURST: I have not seen any cases of trichophytosis barbae lately in Toledo, but I have observed cases of infection of the arms, foreams and neck with *Trichophyton ochraceum*, of bovine origin. Several years ago I encountered about thirty-five cases of this type of infection, which developed at the site of recent vaccination and apparently were due to the use of infected vaccine.

A CASE FOR DIAGNOSIS. Presented by DR. H. L. KEIM.

E. S., a woman, aged 21, had noticed a gradual, generalized loss of hair for three years and an enlarged cervical lymph node, which had been excised and found to be tuberculous.

Following exposure to the sun during the summer of 1930, an eruption had appeared on the face, which disappeared in two months. It had reappeared a month before the time of presentation, following nineteen exposures to a carbon arc light. The patient had lost considerable weight, and the afternoon temperature varied between 100 and 101.5 F.

The mucous membranes were extensively involved; the nares, oral cavity, lips and labia presented an erythematous, bullous eruption, with much edema, pain, crusting and denudation. Over the trunk, especially on the back, there was a dry erythematous eruption consisting of variously sized and shaped superficial, papulosquamous lesions. There were numerous erythematous nodules on the palms and soles, which completely disappeared under pressure. All of the laboratory tests gave negative results. Roentgenographically, both pulmonary apexes showed evidence of tuberculosis.

DISCUSSION

DR. R. C. JAMIESON: This patient has had alopecia areata. At first I thought that the present eruption was a tuberculid induced by exposures to actinic rays. The lesions were on the exposed parts. Then the mouth, palate and vagina became involved, which made the diagnosis more obscure.

DR. G. H. BELOTE: I should consider the possibilities of bullous pemphigus or erythema multiforme. The oral and vaginal lesions indicate pemphigus.

DR. L. W. SHAFFER: The diagnosis has oscillated between pemphigus and erythema multiforme. The tuberculous background complicates the picture. The butterfly distribution of the lesions over the nose suggests a combination of erythema multiforme and lupus erythematosus, while a scar on the finger suggests folliclis.

DR. H. J. PARKHURST: I consider this a probable case of acute disseminated lupus erythematosus, because of the toxic appearance of the patient and the abrupt febrile onset after exposures to ultraviolet light, with a history of tuberculosis.

ERYTHEMA MULTIFORME. Presented by DR. L. W. SHAFFER.

C. B., a Negro boy, aged 6, had been sick for three weeks with tonsillitis, arthritic pains and a temperature of from 100 to 103 F. For two weeks there had been a widespread vesicular eruption over the trunk and the dorsa of the hands. The lesions on the trunk were relatively sparse, pinhead-sized, erythematous papules and vesicles, all in one stage. Those on the hands were vesicles and pustules of various sizes, some of them being 0.5 cm. in diameter. They were slightly crusted and apparently subsiding. Some of the lesions on the hands suggested the formation of irides.

DISCUSSION

DR. GEORGE VANRHEE: The possibility of scabies or of atypical varicella must also be considered. The condition apparently is not varicella.

DR. H. J. PARKHURST: The condition seemed to be erythema multiforme, with some lesions of the iris type. I found no evidence of scabies or varicella.

DR. R. C. JAMIESON: The condition is probably erythema multiforme, but it might be atypical varicella with secondary infection of the lesions.

Directory of Dermatologic Societies *

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Elmore B. Tauber, Chairman, 19 W. 7th St., Cincinnati.
Francis E. Senear, Secretary, 55 E Washington St., Chicago.
Place: Philadelphia. Time: June 8-12, 1931.

American Dermatological Association

C. Morton Smith, President, 437 Marlboro St., Boston.
W. H. Guy, Secretary, 500 Penn Ave., Pittsburgh.
Place: Toronto. Time: June 15-17, 1931.

British Association of Dermatology and Syphilology (Canadian Branch)

Emerson J. Trow, President, Medical Arts Bldg., Toronto.
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* Secretaries of dermatologic societies are requested to furnish the information necessary for the editor to make this list complete and to keep it up to date.

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Therapeutic Evaluation in Treatment of Syphilis. E. T. Burke, Brit. M. J. **1**:306 (Feb. 21) 1931.

Thermal Baths in Treatment of Syphilis. E. A. Purdum, J. Arkansas M. Soc. **27**:135 (Dec.) 1930.

Book Reviews

LE CHANCRE MOU. By G. MILIAN. Price, 20 francs. Pp. 52. Paris: Gaston Doin, 1930.

The author covers the entire field of chancroidal lesions of various types with their complications, combinations of chancre and chancroid and disease due to general dissemination of the organisms.

Thirty-three pages are given to clinical considerations and eleven to laboratory diagnosis. Treatment is discussed in the last eight pages.

Chancroid is on the increase in France. The author considers that lymphogranulomatosis inguinale is merely chancroidal adenopathy following a transient type of chancroidal lesion (chancre mou volant). He bases his opinion partially on the similarity in the microscopic pictures of the two. The intradermal vaccine reaction and the complement-fixation reaction are discussed.

Vaccine therapy has a more favorable effect on the bubo than on the original lesion.

The photographs are excellent.

PRURITS ET PRURIGOS. By LUCIEN HUDELO. Price, 15 francs. Pp. 40. Paris: Gaston Doin, 1930.

The author discusses general and local pruritus, pruritus with lichenification and the prurigos. Six pages are devoted to a preamble and general considerations, seventeen pages to clinical features, three pages to pathogenesis, five pages to general treatment and five pages to specific treatment.

The author emphasizes the fact that in spite of an enormous amount of work on pruritus, the cause has not been found. He is inclined to attribute the fundamental mechanism to hypersensitiveness and emphasizes especially the hereditary element. In treatment, he emphasizes the value of rest, relaxation and change of environment (seashore for the rich and hospital for the poor). Other types of therapy are detailed.

The photographs are excellent.

LA KERATINISATION DE L'ÉPIDERME ET DES PHANÈRES. By A. GIROUD and H. BULLIARD. Price, 50 francs. Pp. 86. Paris: Gaston Doin, 1930.

The authors review the literature and present the results of their researches on the sulphydryl compounds of the epidermis and its appendages. They studied epidermis, hair, feathers, scales, nails, hoofs, etc., of several vertebrates. The sulphydryl reaction is positive in the stratum mucosum of both the epidermis and the appendages, but it is especially marked just within the cornified structure of the appendages. The authors conclude that a free form and a fixed form of glutathion exists, which constitutes the plastic substance of the keratin. They distinguish two forms of keratin, a soft form found in the epidermis and a hard form found in the appendages. Only the soft form is accompanied by keratohyalin. The epidermal keratin is poor in sulphur content, and the keratin of the appendages is rich in sulphur, which exists in both instances as cystine.

LES PHÉNOMÈNES DE CHOC DANS L'URTICAIRE. By PASTEUR VALLERY-RADOT and LUCIEN ROUQÈS. Price, 35 francs. Pp. 232. Paris: Masson & Cie, 1930.

A clinical study occupies 140 pages and therapeutic considerations the remainder of the book. After a brief discussion of anaphylaxis and colloidoclasia, the various types of urticaria are considered: alimentary, medicamentous, parasitic, psychogenic,

from effort, from heat and from cold. The collateral factors in the production of urticaria, such as abnormalities of the nervous system, the endocrine glands, acid-base equilibrium of the blood, hepatic insufficiency, digestive ferments, infection and preexisting local lesions, are discussed. The portion on treatment includes methods to produce antianaphylaxis, specific desensitization, the treatment for the collateral abnormalities mentioned and empiric remedies.

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COLD IN RELATION TO SKIN DISEASES. By H. Haxthausen. Paper. Pp. 160. Copenhagen: Levin & Munksgaard, 1930.

PRACTICAL RADIATION THERAPY. By Ira I. Kaplan, with a chapter on Applied X-Ray Physics by Paul B. Braestrup. Cloth. Pp. 342. Philadelphia: W. B. Saunders Company, 1931.

TUBERCULOSE DER HAUT. By Richard Volk. In HANDBUCH DER HAUT- UND GESCHLECHTSKRANKHEITEN. Edited by J. Jadassohn. Paper. Pp. 686. Berlin: Julius Springer, 1930.

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